



Odtwarzacz DVD / Magnetowid VHS

VC-8716

VC-8816

SECTION 1

SUMMARY

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PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

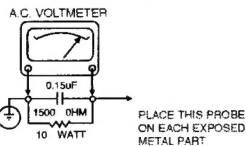
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED, A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES. DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS, HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST. USE AN A.C. VOLT-METER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER: CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150V A.C. TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C. ANY VOLTAGE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT: GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SUBJECT: X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T. ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS X-RAY SHIELD IN COLOR SETS, ALWAYS RE-INSTALL THEM.
3. IT IS ESSENTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED, THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE, AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV. B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DEFINED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT: IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTERNAL IMPLOSION PROTECTION SYSTEM, BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION, AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.

2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBY-HOLE OR CLOSELY FITTING SHELF SPACE OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the VCR+DVD covered by this service data and its supplements and addends, read and follow the SAFETY PRECAUTIONS. NOTE : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions. Remember Safety First.

General Servicing Precautions

1. Always unplug the VCR+DVD AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.

Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this VCR+DVD or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator. Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this VCR+DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SPECIFICATIONS

DVD PART

Power supply	AC 200~240V, 50 Hz
Power consumption	19W
Mass	5.4kg
External dimensions	430 x 97.5 x 360 (W x H x D)
Signal system	PAL 625/50, NTSC 525/60
Laser	Semiconductor laser, wavelength 650nm
Frequency range (digital audio)	4 Hz to 20 kHz
Signal-to-noise ratio (digital audio)	More than 100 dB (EIAJ)
Audio dynamic range (digital audio)	More than 100 dB (EIAJ)
Harmonic distortion(digital audio)	0.008%
Wow and flutter	Below measurable level (less than +0.001%(W.PEAK)) (EIAJ)
Operations	Temperature : 5°C(41°F) to 35°C(95°F), Operation status : Horizontal

OUTPUTS

Video outputs	1.0V(p-p), 75Ω, negative sync., RCA jack x 1/SCART(TO TV)
S video outputs	(Y)1.0V(p-p), 75Ω, negative sync., Mini DIN 4-pin x 1 (C)0.3V(p-p), 75Ω
Component video output	(Y) 1.0 V (p-p), 75 Ω, negative sync., RCA jack x 1 (Pb)/(Pr) 0.7 V (p-p), 75 Ω
Audio output(digital audio)	0.5V(p-p), 75Ω, RCA jack X 1/SCART(TO TV)
Audio output(optical audio)	Optical connector x 1
Audio output(analog audio)	2.0Vrms (1kHz, 0dB), 330Ω, RCA jack (L, R) x 1/ SCART(TO TV)

VHS PART

Video Head System	Double azimuth 4 heads, helical scanning
Tape format	Tape width 12.7 mm (0.5 inch)
Timer	24 hours display type

*Designs and specifications are subject to change without notice.

*Weight and dimensions shown are approximate.

SECTION 2 CABINET & MAIN CHASSIS

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1. Cabinet and Main Frame Section



This diagram illustrates the exploded view of the product packaging and its components. The main assembly consists of a box carton (802) containing packing material (803) and a central unit. The unit is secured by a scart cable (821) and an instruction assembly (801). A battery (808) and a remote control (800) are also shown. A dashed box highlights optional parts, including various cable assemblies (810, 806, 811, 812, 813).

COMPONENTS:

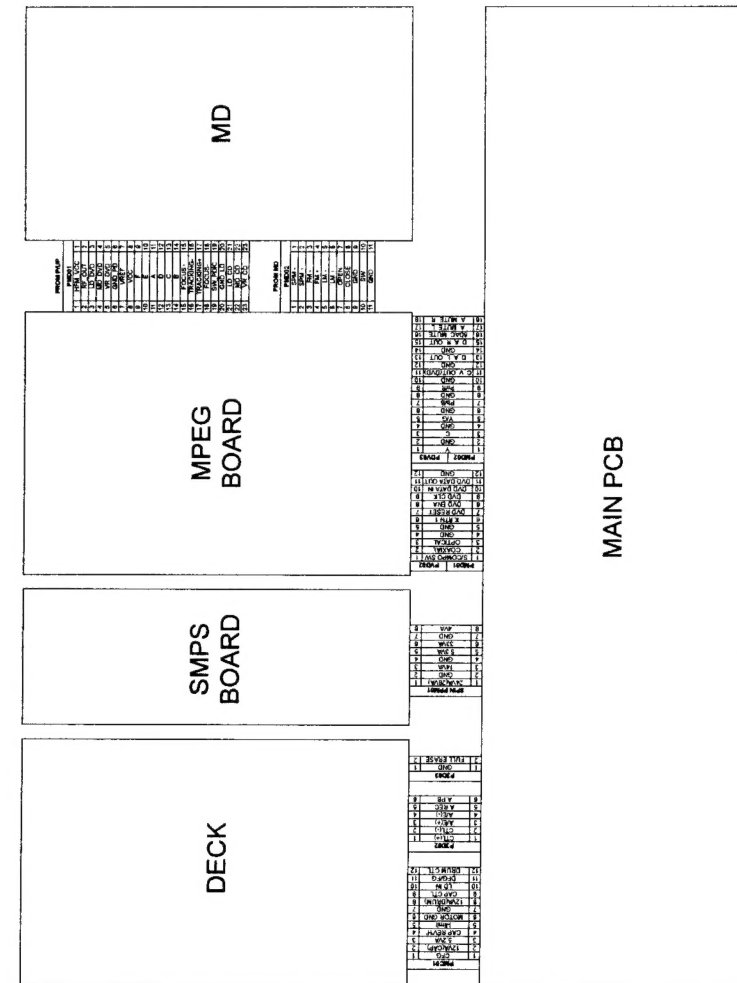
- 810 CABLE ASS'Y, RF
- 806 CABLE, COAXIAL
- 811 PLUG ASS'Y 1WAY(YELLOW)
- 812 PLUG ASS'Y 2WAY(RED/WHITE)
- 813 PLUG ASS'Y 1WAY(BLACK)
- 808 BATTERY
- 800 REMOCON
- 803 PACKING
- 821 SCART CABLE
- 801 INSTRUCTION ASSEMBLY
- 804 BAG
- 802 BOX CARTON

★ OPTIONAL PARTS

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OVERALL WIRING DIAGRAM



VCR PART ELECTRICAL ADJUSTMENT PROCEDURES

1. Servo Adjustment

- 1) PG Adjustment
• Test Equipment

a) OSCILLOSCOPE C) PAL MODEL : PAL SP TEST TAPE
b) NTSC MODEL : NTSC SP TEST TAPE

• Adjustment And Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY	V.Out H/SW(TP)	R/C TRK JIG KEY	6.5 ± 0.5H

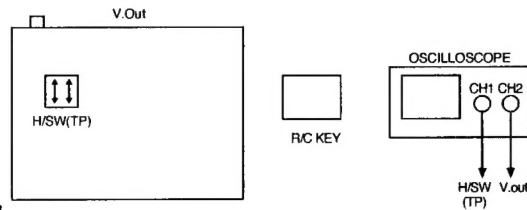
• Adjustment Procedure

- a) Insert the SP Test Tape and play.
Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the "ATR" is blink after the SP Test Tape is inserted.
b) Connect the CH1 of the oscilloscope to the H/SW(TP) and CH2 to the Video Out for the VCR.
c) Trigger the mixed Combo Video Signal of CH2 to the CH1 H/SW(TP), and then check the distance (time difference), which is from the selected A(B) Head point of the H/SW(TP) signal to the starting point of the vertical synchronized signal, to 6.5H ± 0.5H (412μs, 1H=63μs).
d) Stop the playback, then it goes out to PG adjusting mode after many the PG data.

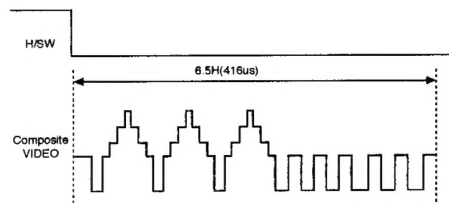
• PG Adjustment Method

- a-1) Playback the SP standard tape
b-2) Press the "1" key on the Remote controller and the "PLAY" key on the Front Panel the same time, then it goes in to Tracking initial mode.
c-3) Repeat the above step(No.b-2), then it finishes the PG adjusting automatically.
d-4) Stop the playback, then it goes out to PG adjusting mode after many the PG data.

• CONNECTION

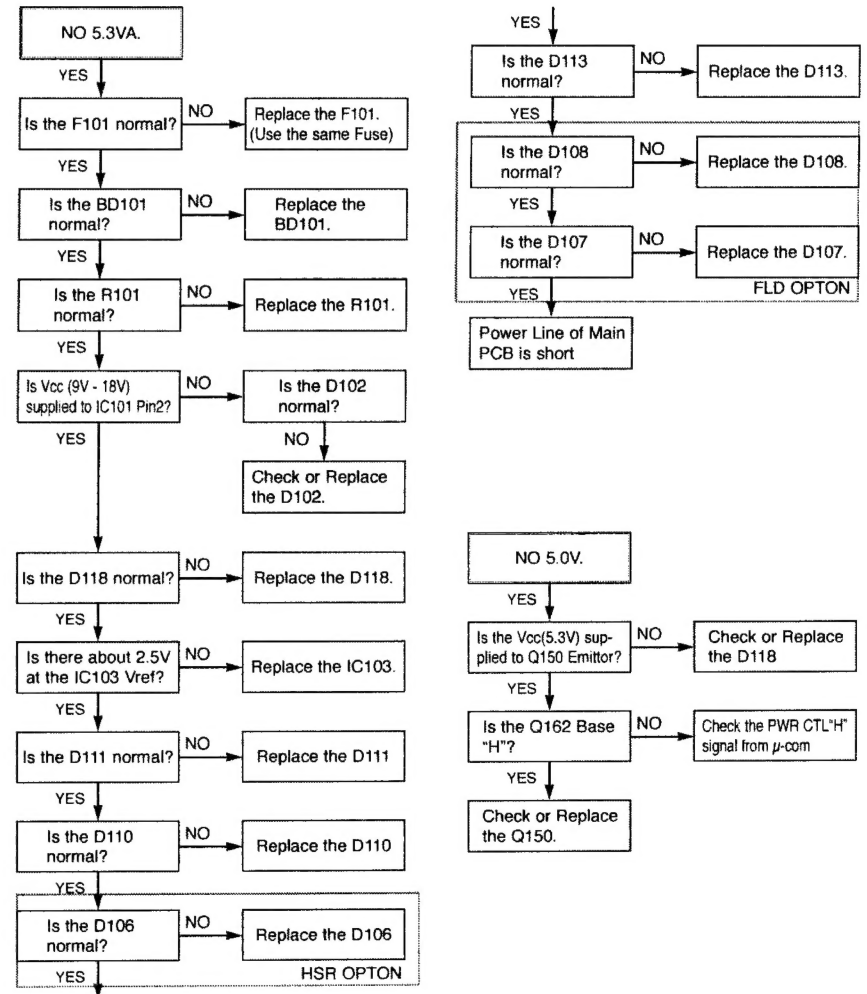


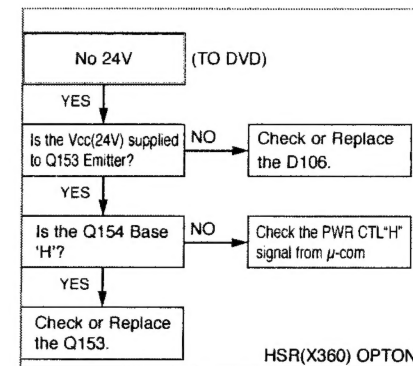
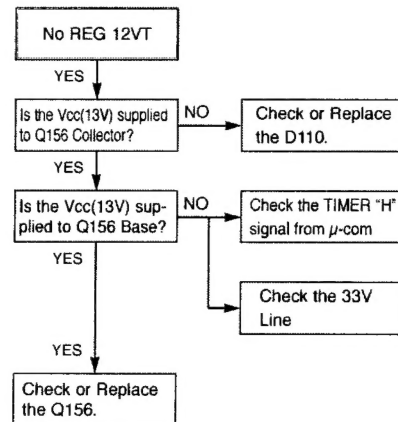
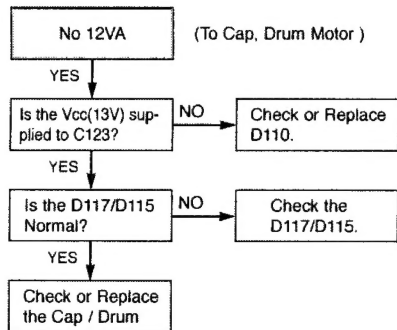
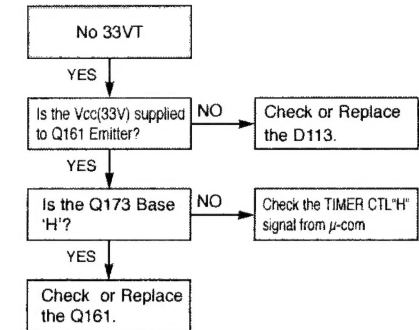
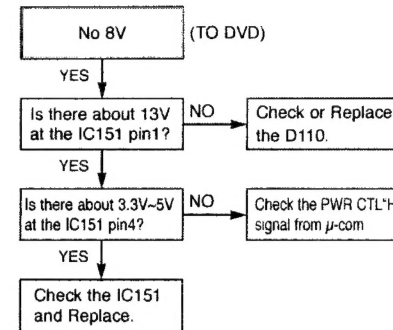
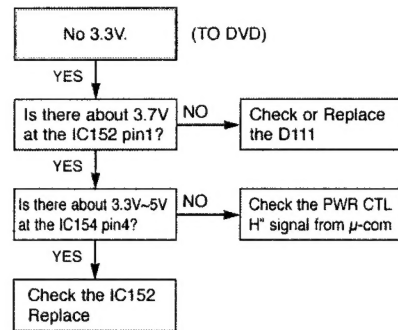
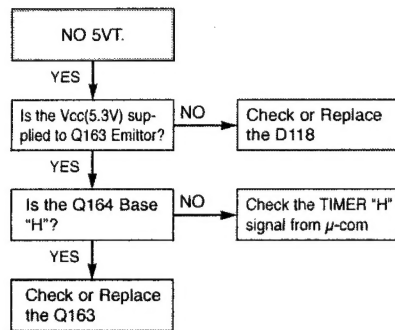
• WAVEFORM



ELECTRICAL TROUBLESHOOTING GUIDE

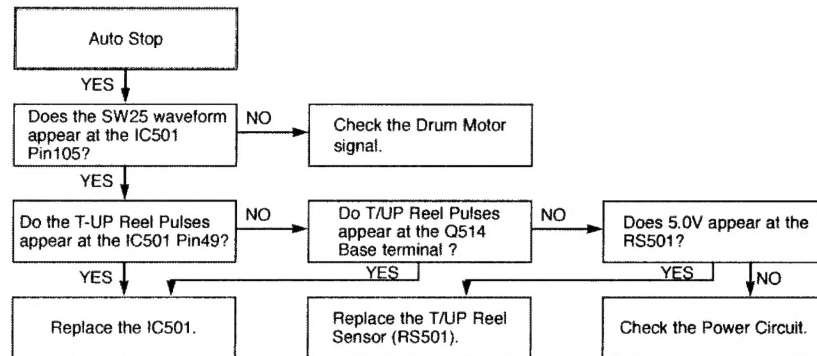
1. Power(SMPS) CIRCUIT



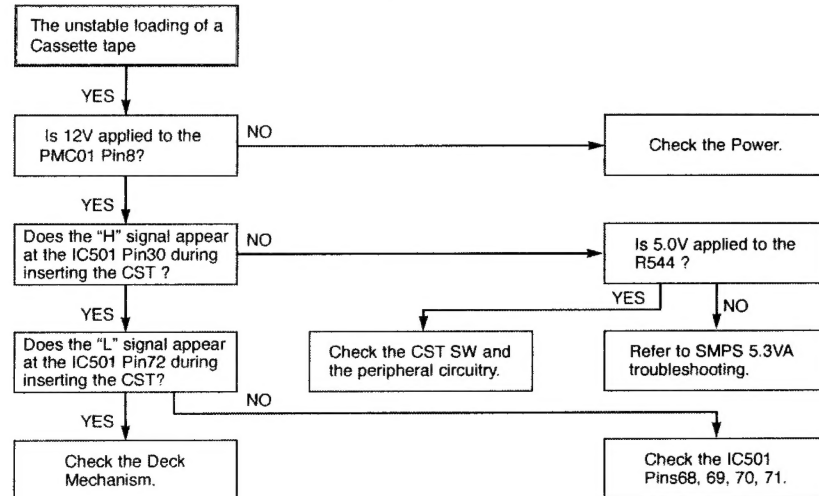


2. SYSTEM/KEY CIRCUIT

(1) AUTO STOP



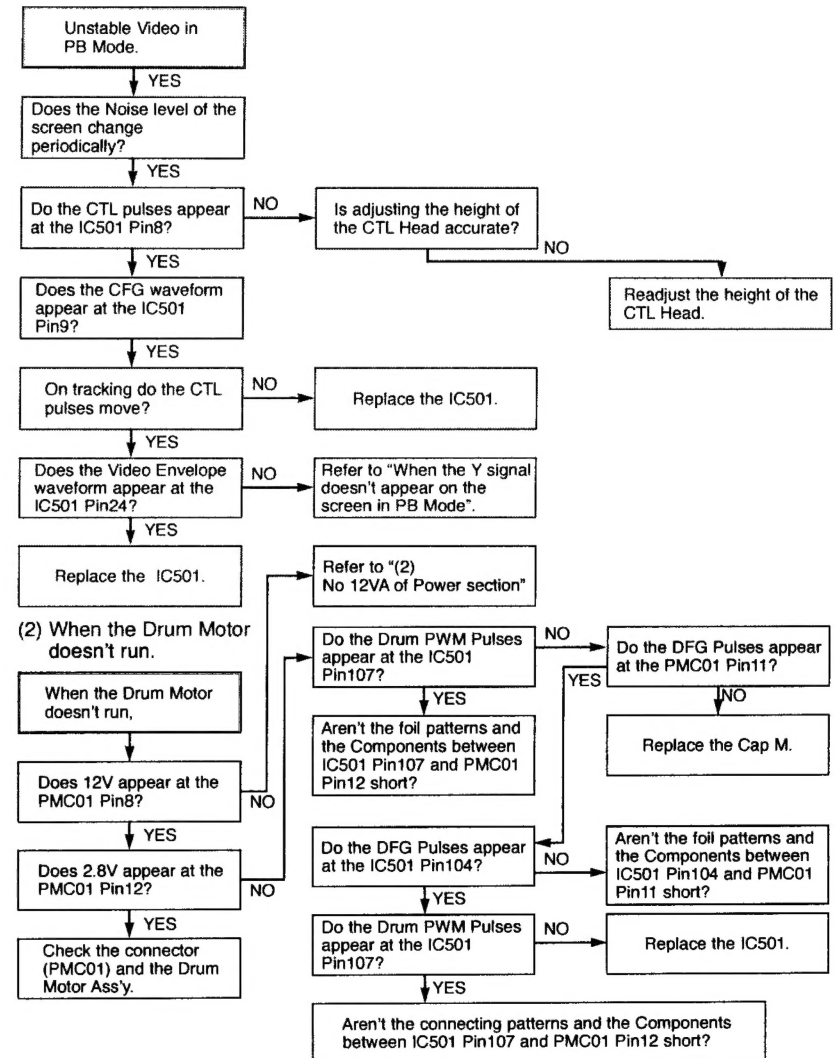
(2) The unstable loading of a Cassette tape



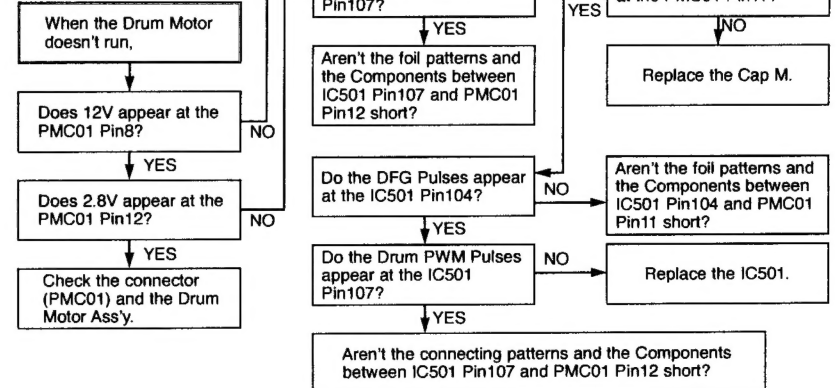
Caution : Auto stop can occur because Grease or Oil is dried up

3. SERVO CIRCUIT

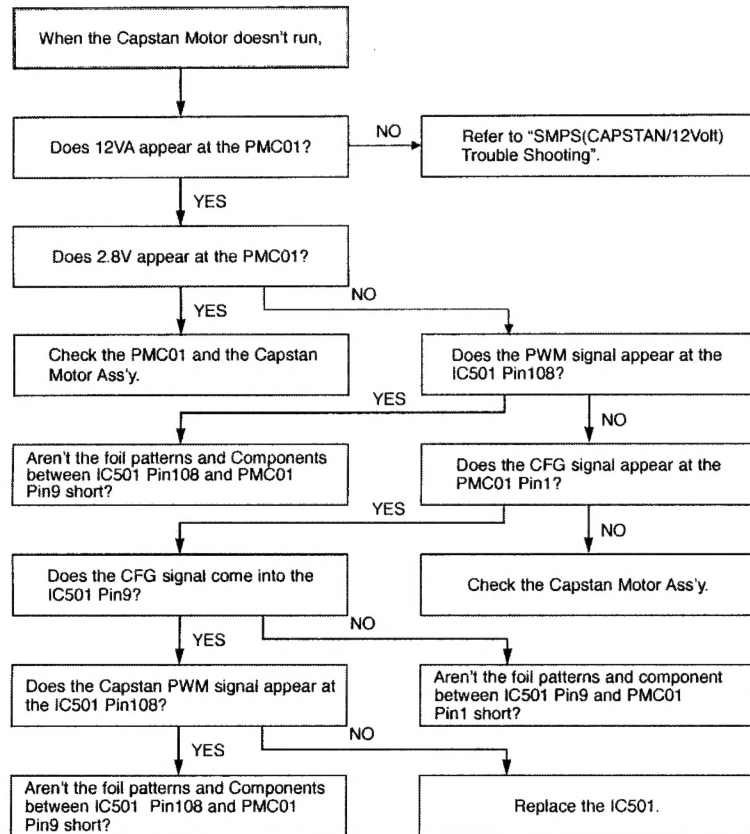
(1) Unstable Video in PB MODE



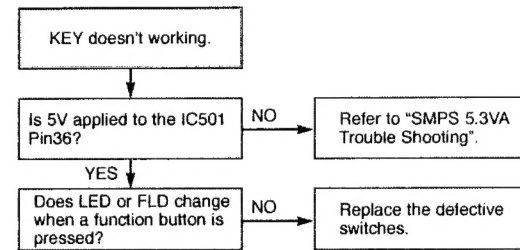
(2) When the Drum Motor doesn't run.



(3) When the Capstan Motor doesn't run,

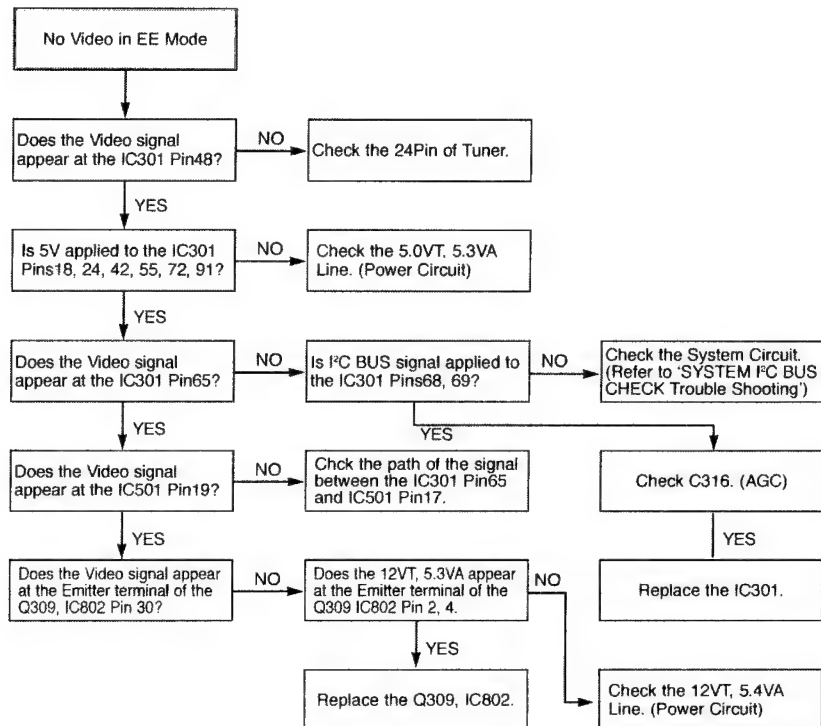


(4) KEY doesn't working

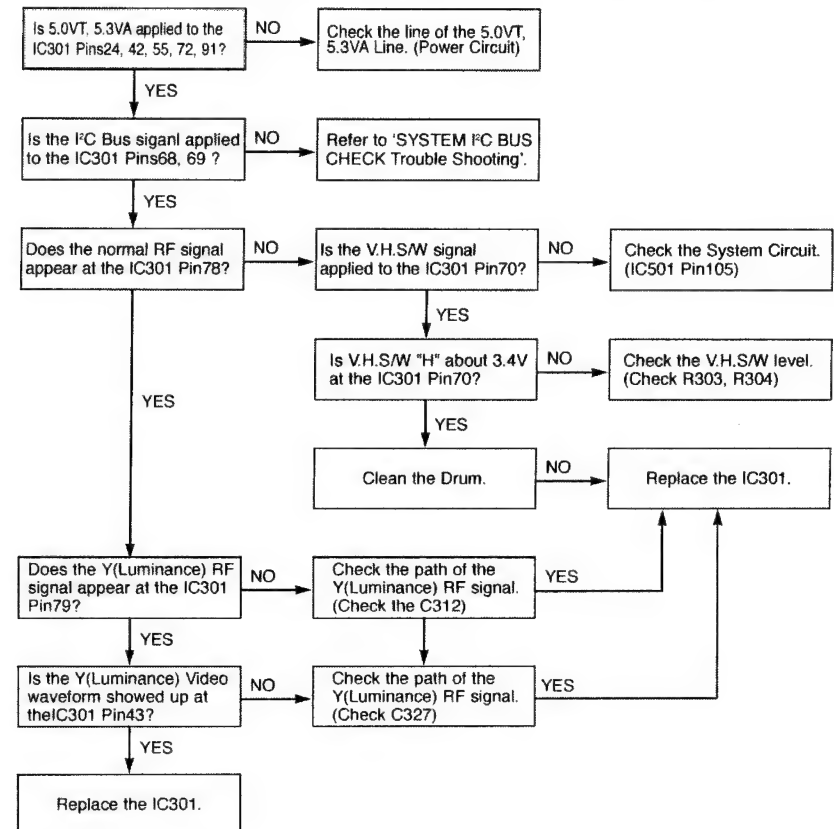


4. Y/C CIRCUIT

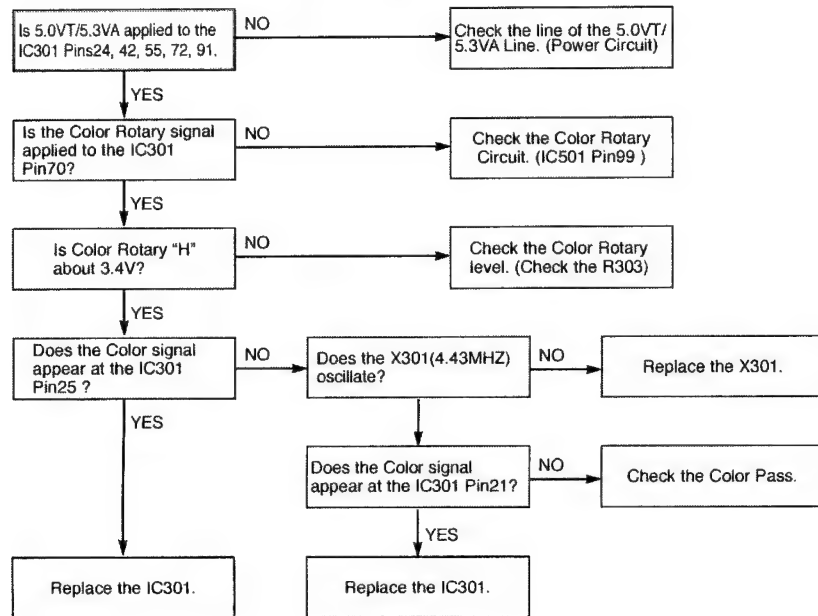
(1) No Video in EE Mode,



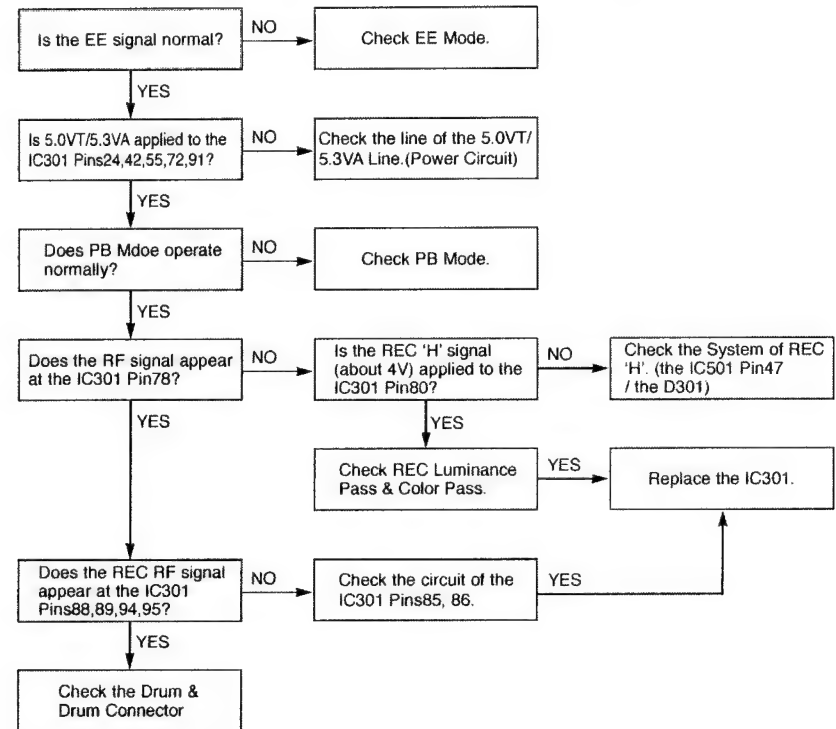
(2) When the Y(Luminance) signal doesn't appear on the screen in PB Mode,



(3) When the C(Color) signal doesn't appear on the screen in PB Mode,

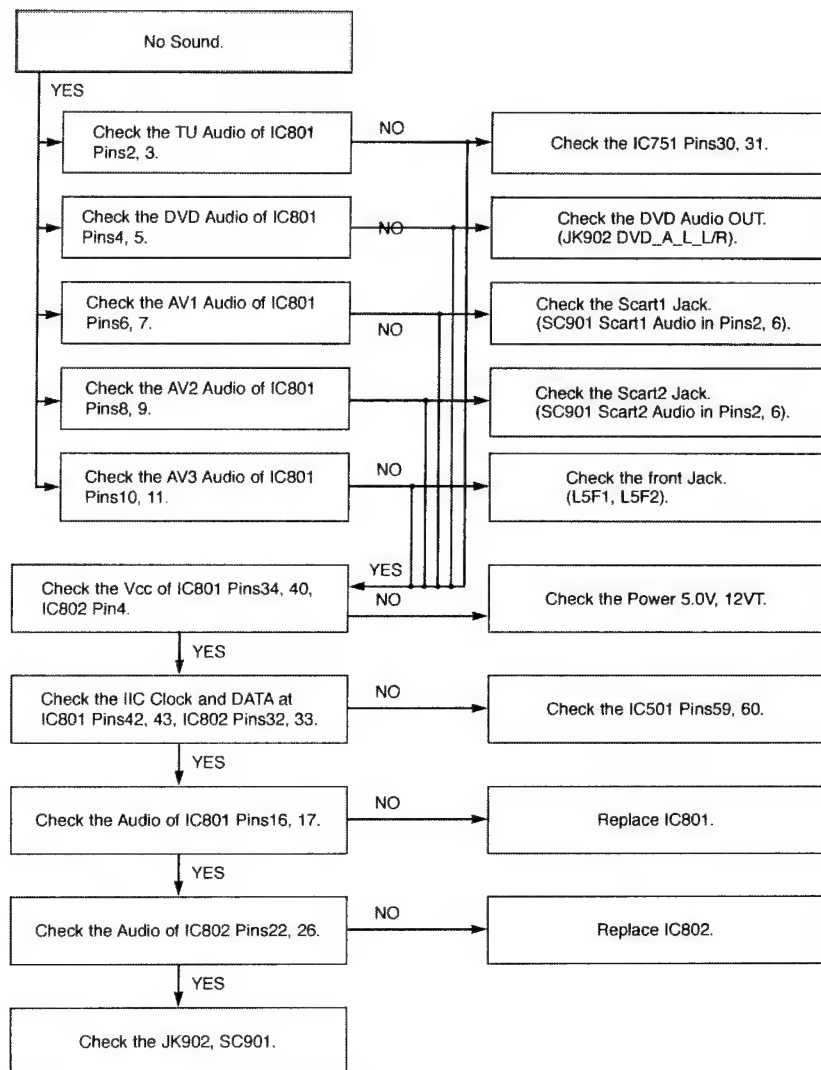


(4) When the Video signal doesn't appear on the screen in REC Mode,



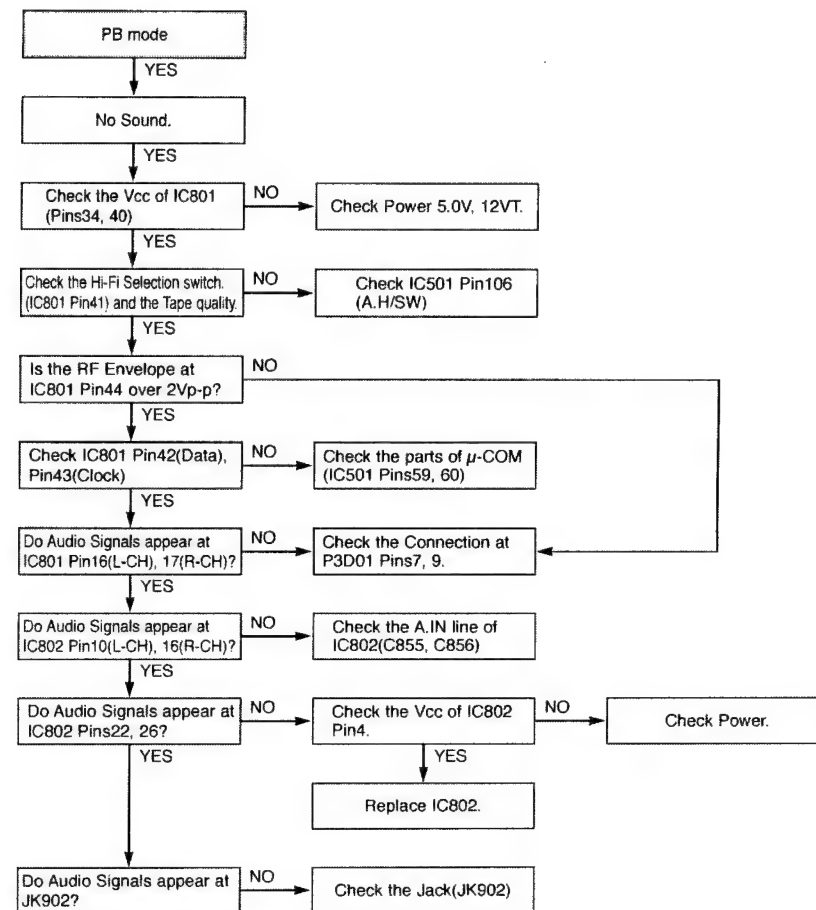
5. HI-FI CIRCUIT

(A) No Sound(EE Mode)



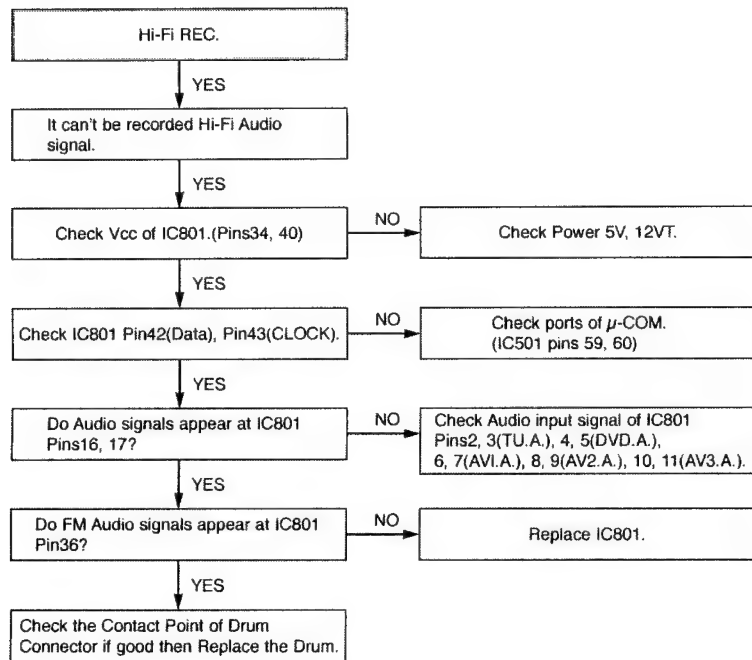
3-15

(B) Hi-Fi Playback



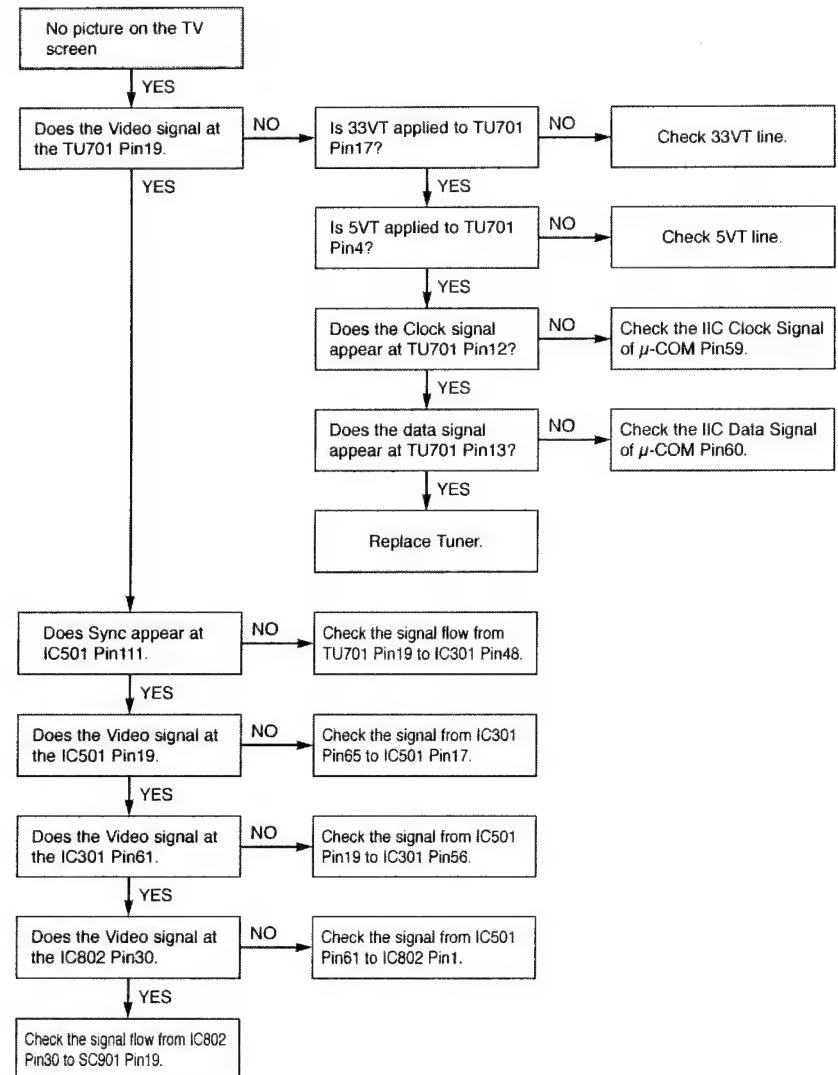
3-16

(C)

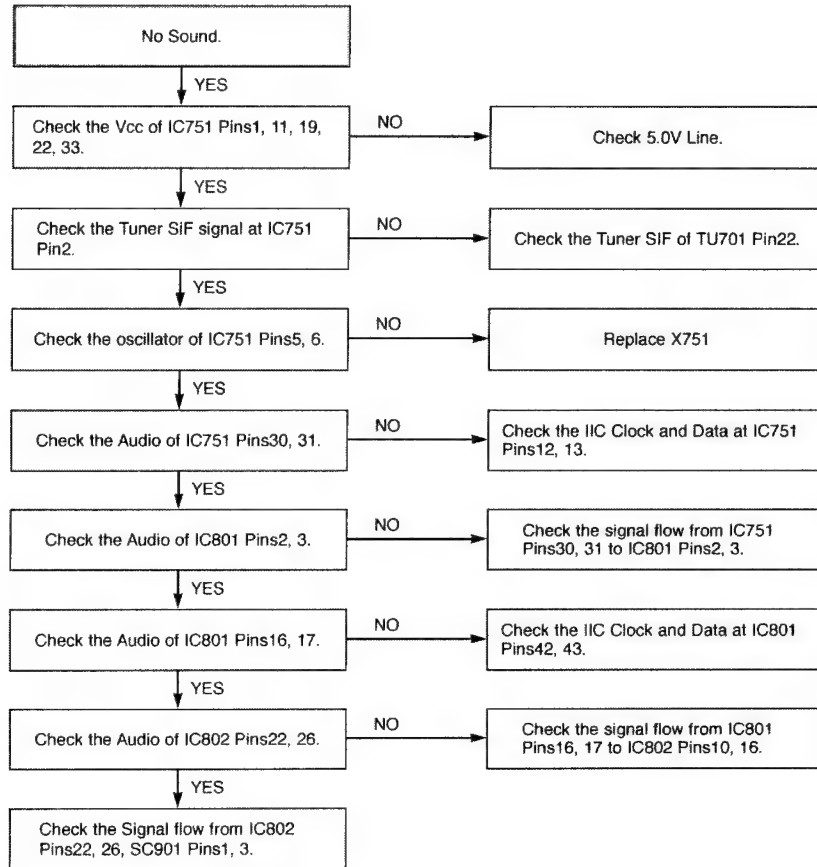


6. Tuner/IF CIRCUIT

(A) No Picture on the TV screen

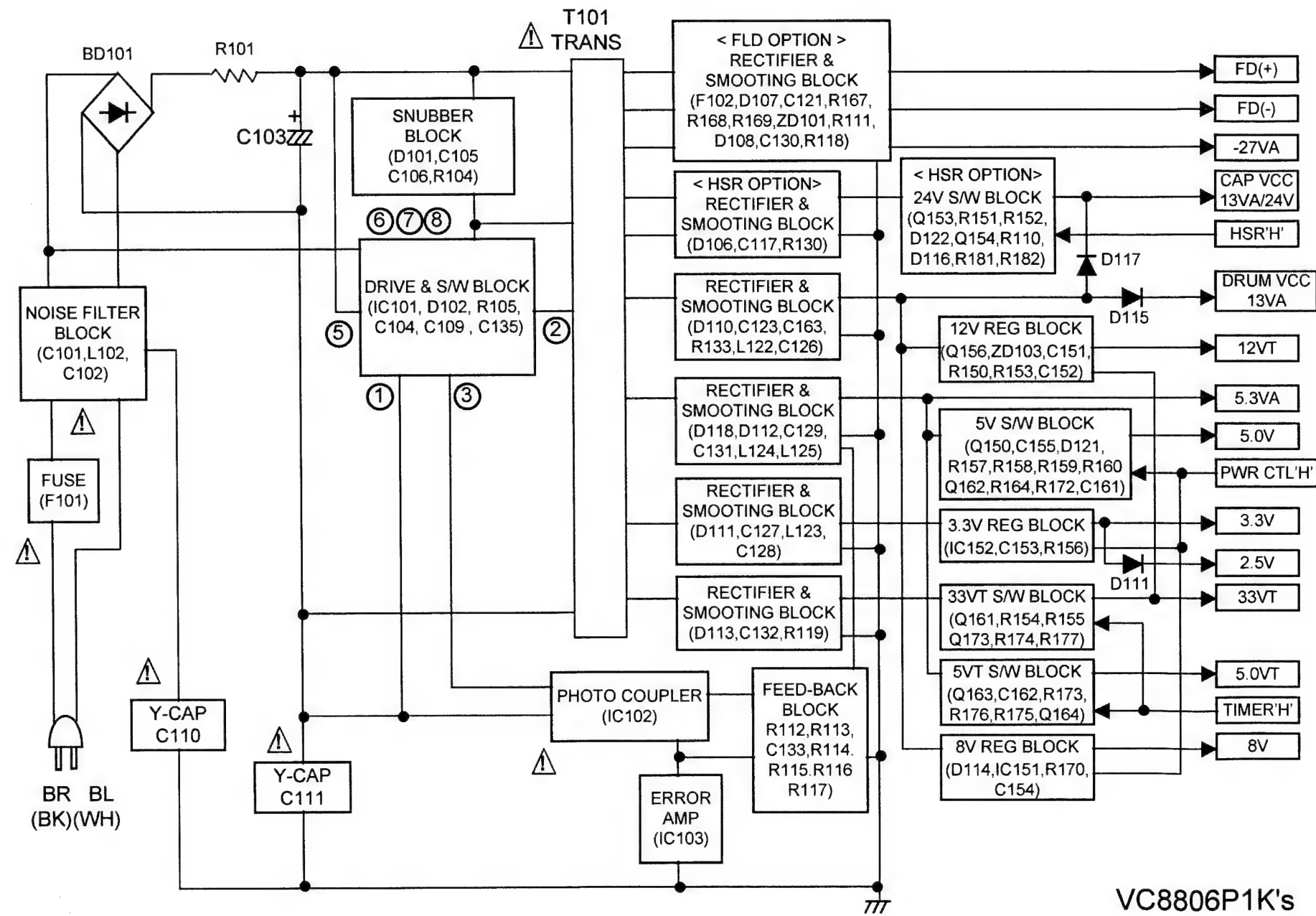


(B) No Sound

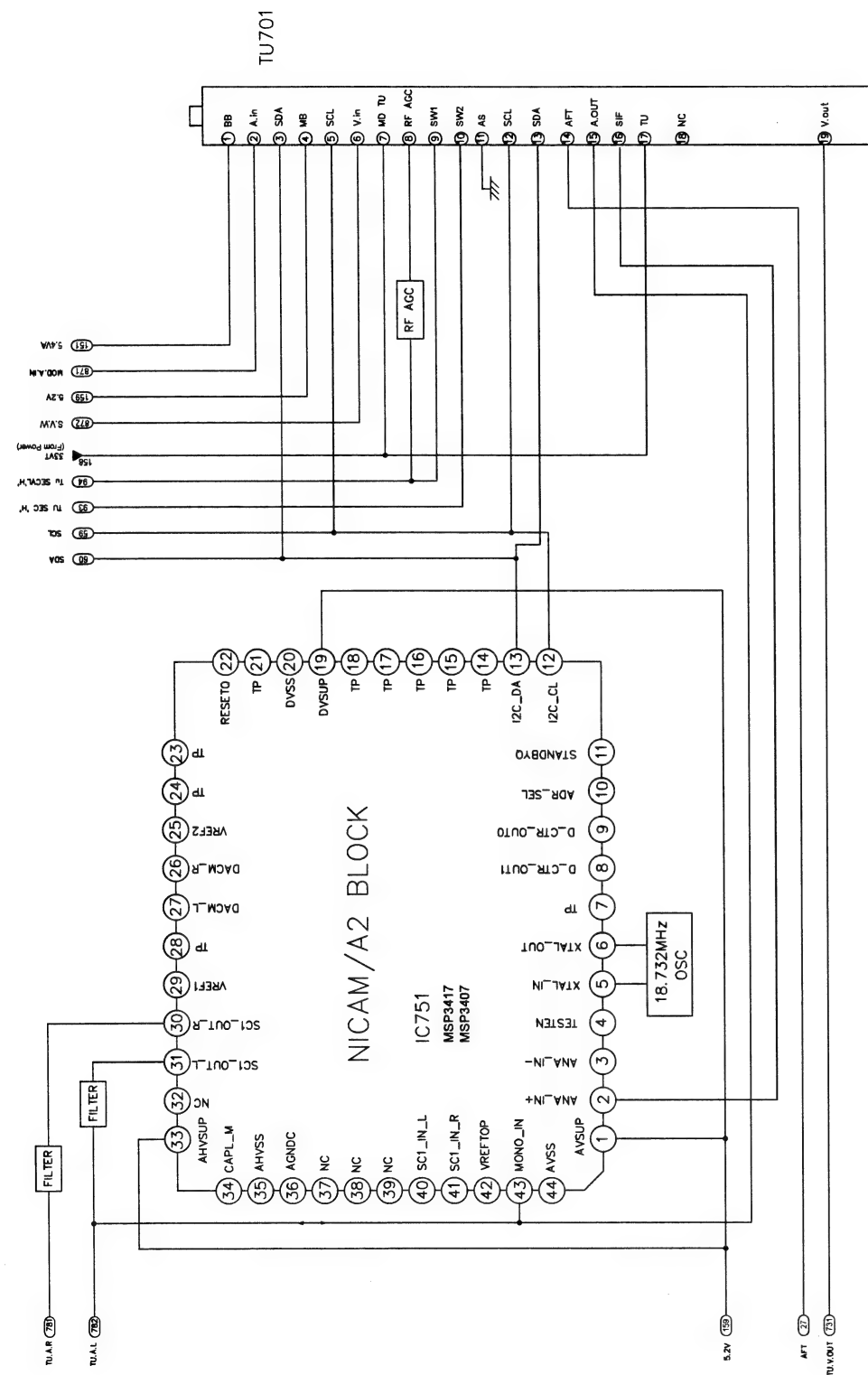


BLOCK DIAGRAMS

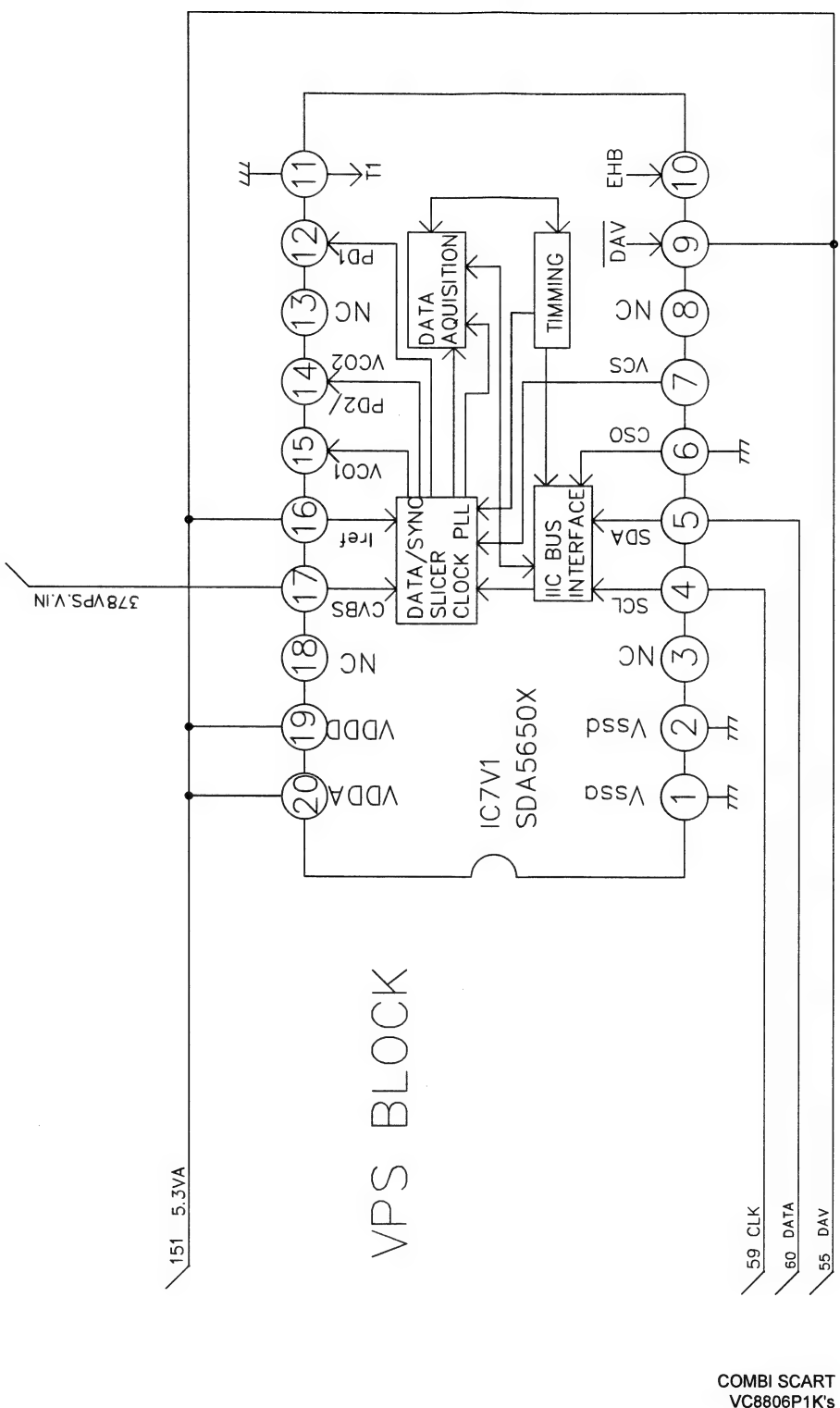
1. POWER(SMPS) BLOCK DIAGRAM



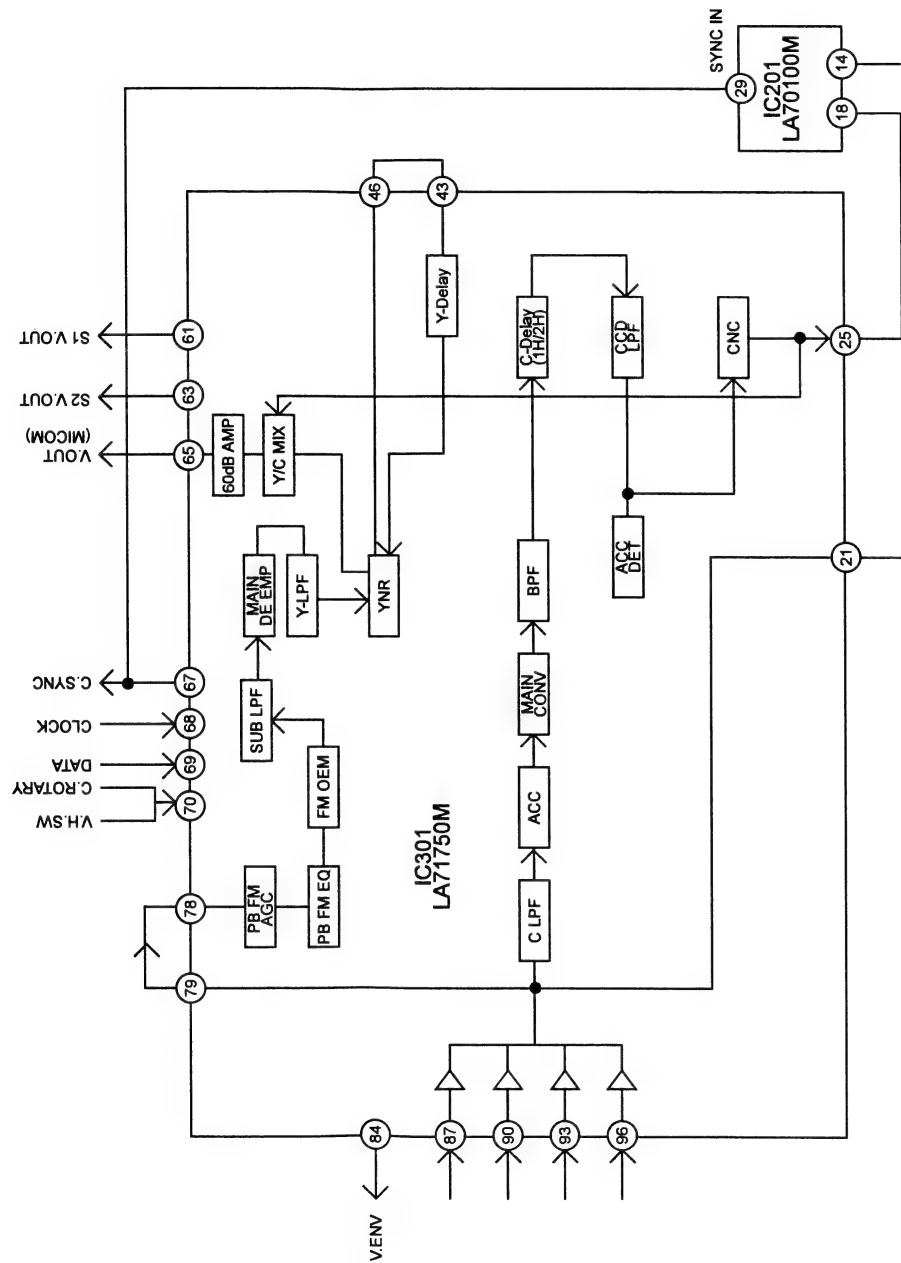
2. Tu/IF, NICAM & A2 BLOCK DIAGRAM



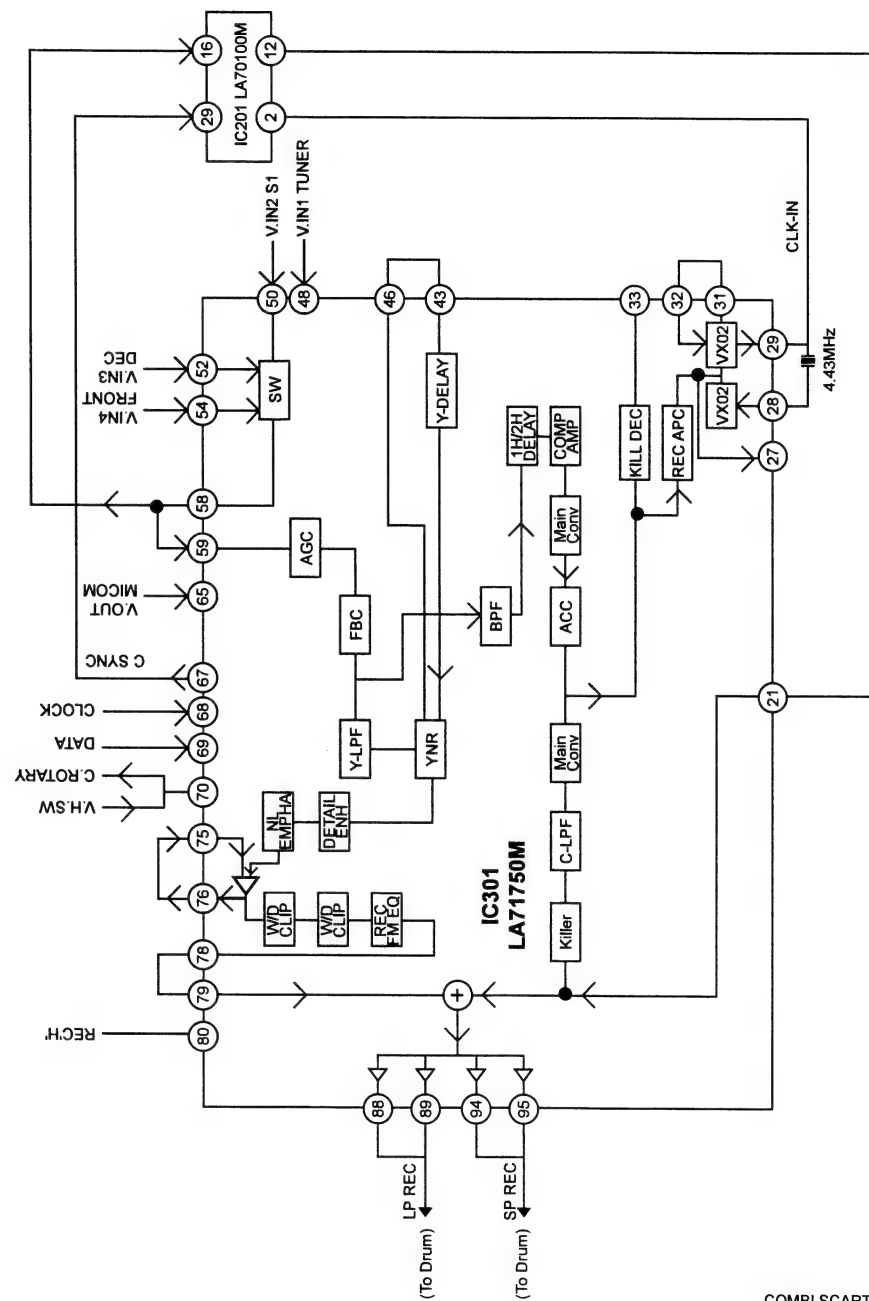
3. VPS BLOCK DIAGRAM



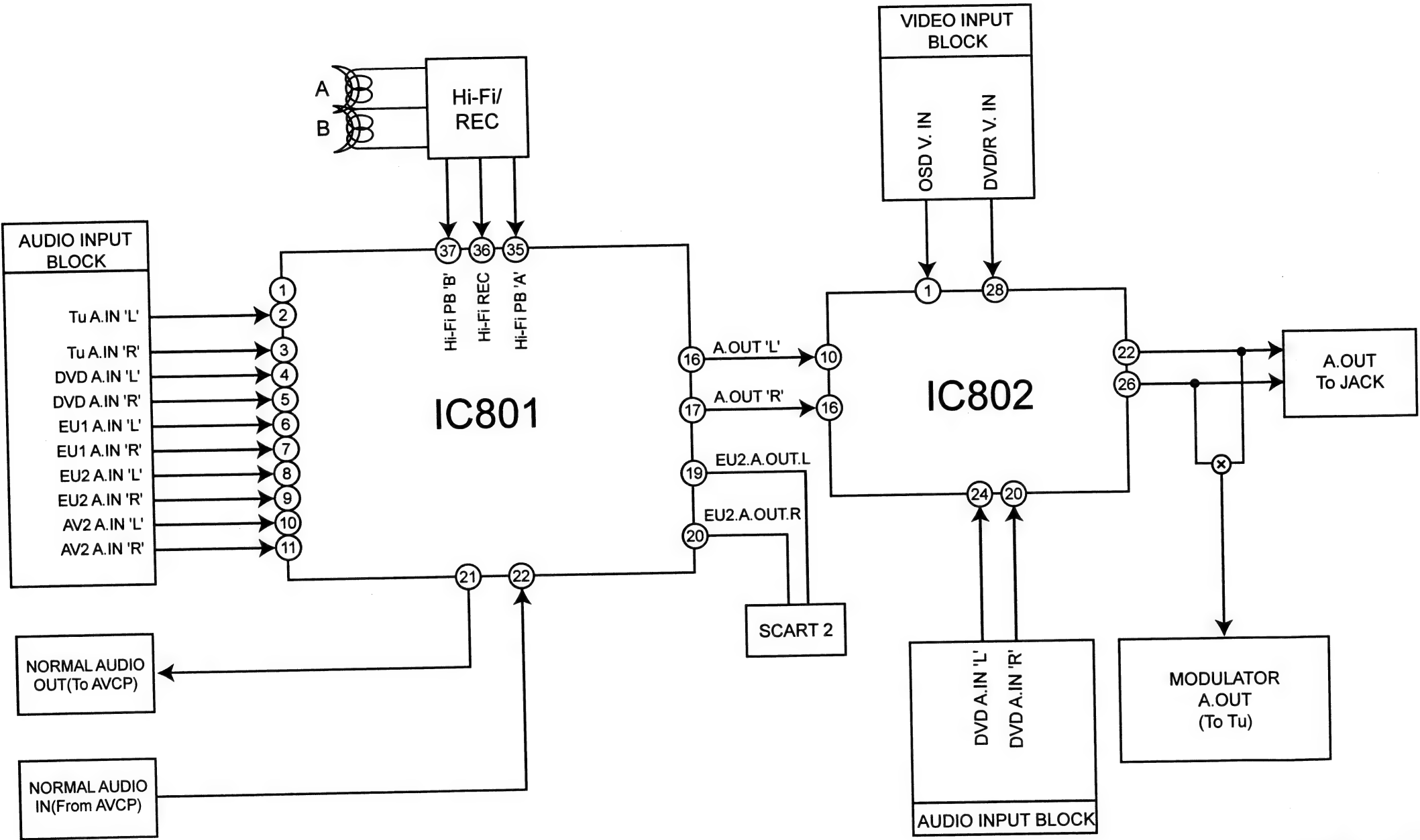
4. Y/C BLOCK DIAGRAM (PB MODE)



(REC MODE)

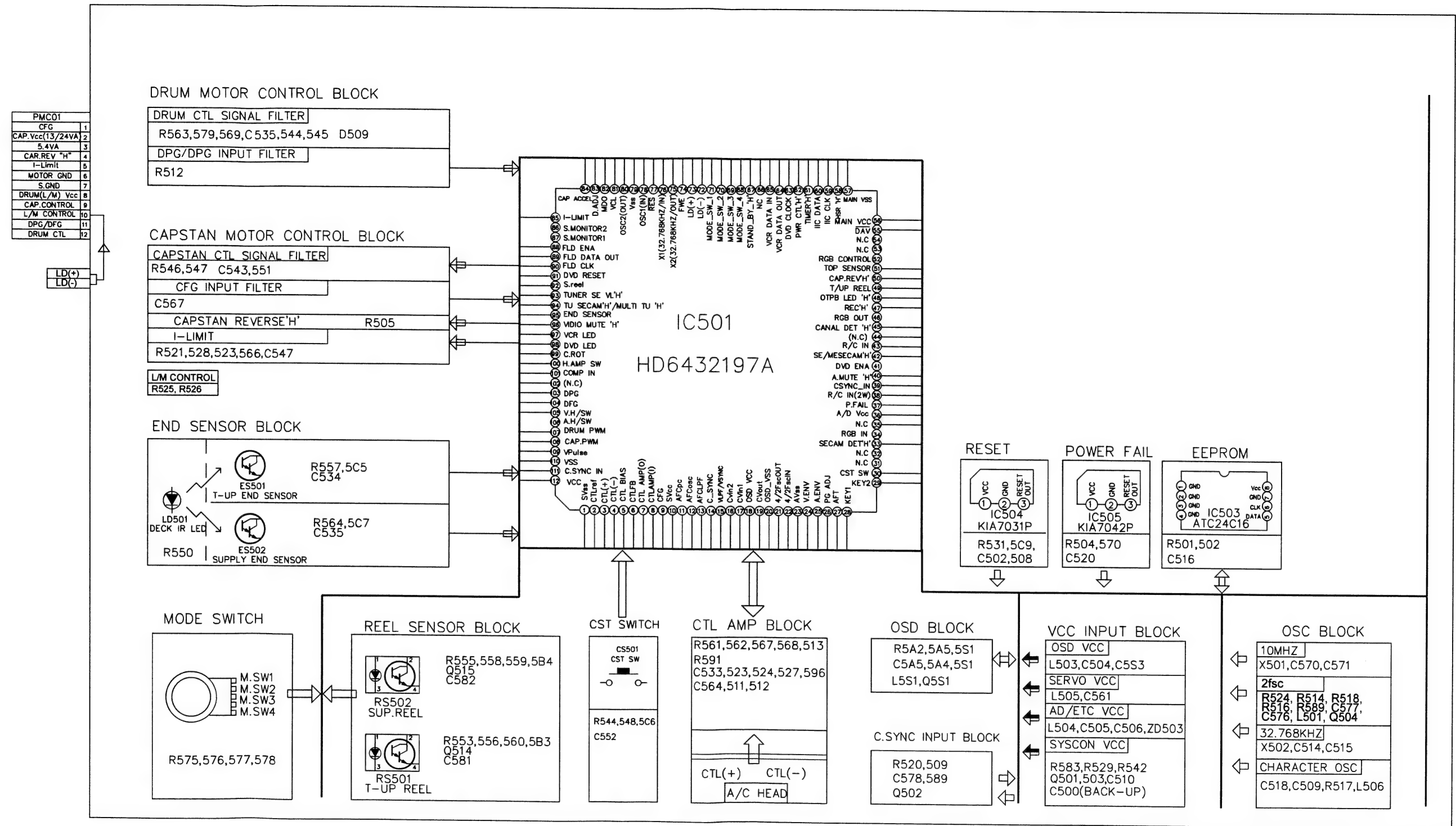


5. Hi-Fi BLOCK DIAGRAM



COMBI SCART
VC8806P1K's

6. SYSTEM BLOCK DIAGRAM



COMBI SCART
VC8806P1K's

CIRCUIT DIAGRAMS

1. POWER(SMPS) CIRCUIT DIAGRAM 1

IMPORTANT SAFETY NOTICE

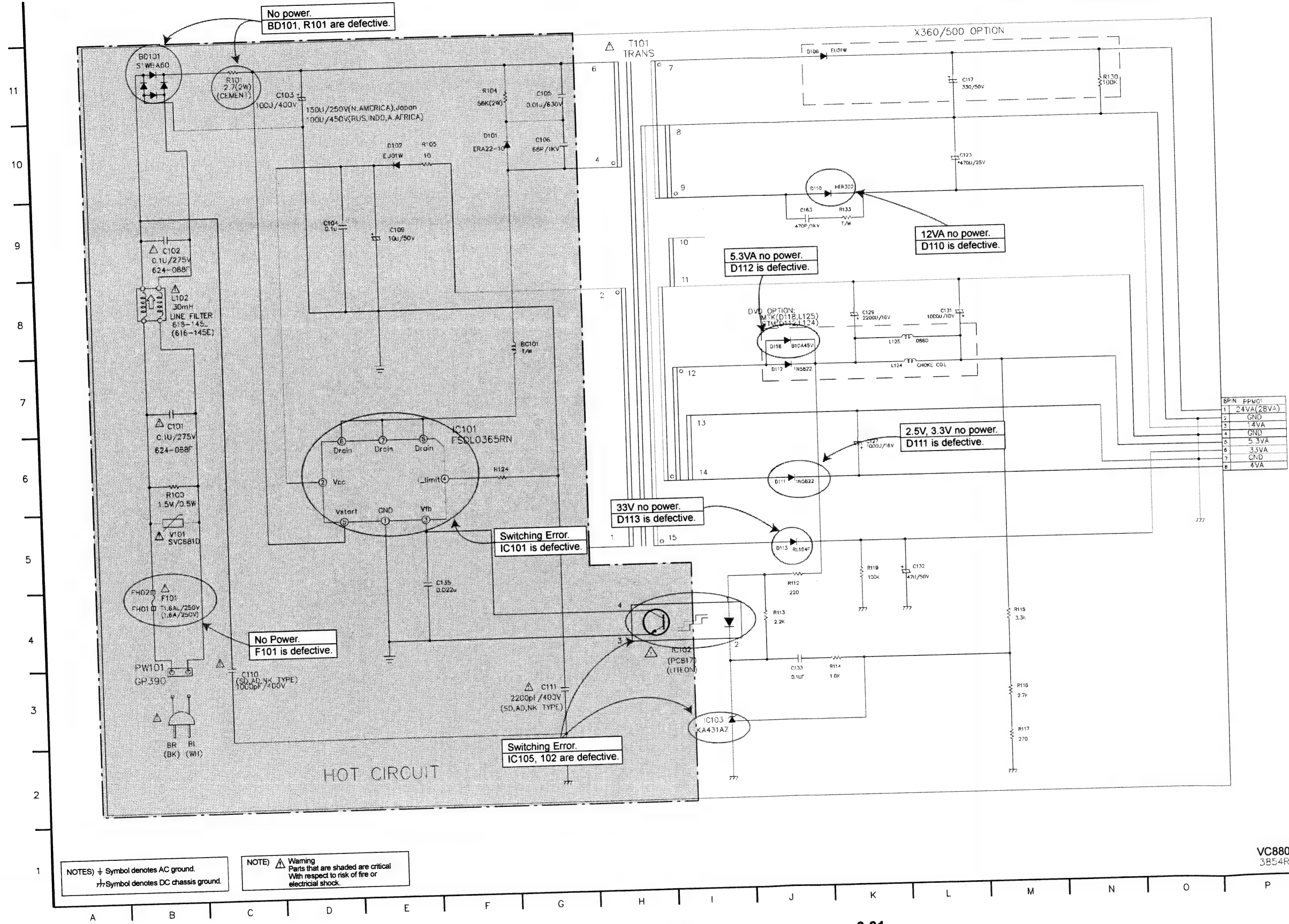
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE LG ELECTRONICS CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIR-

CUIT. SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION. THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

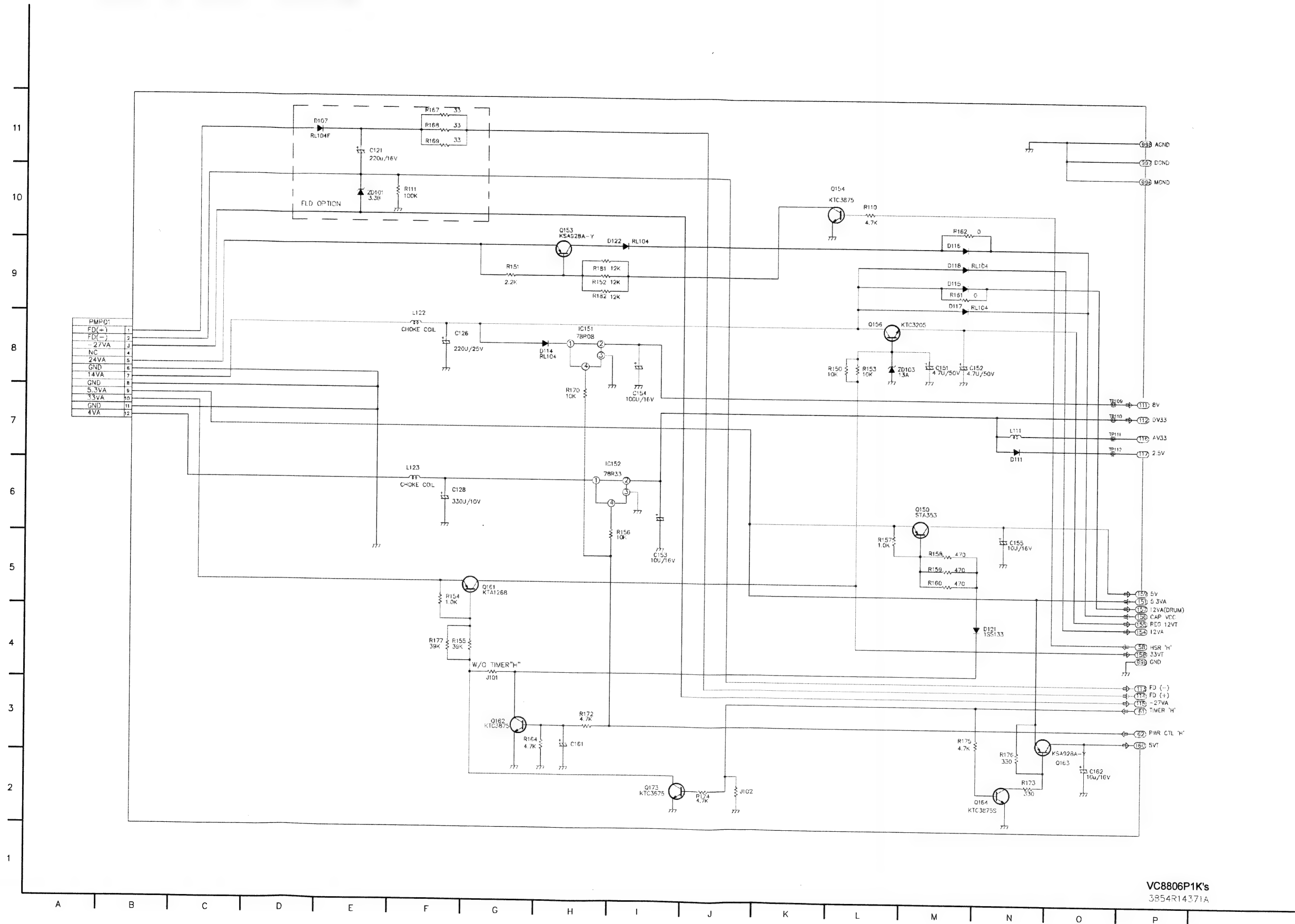
NOTE :

1. Shaded(■) parts are critical for safety. Replace only with specified part number.

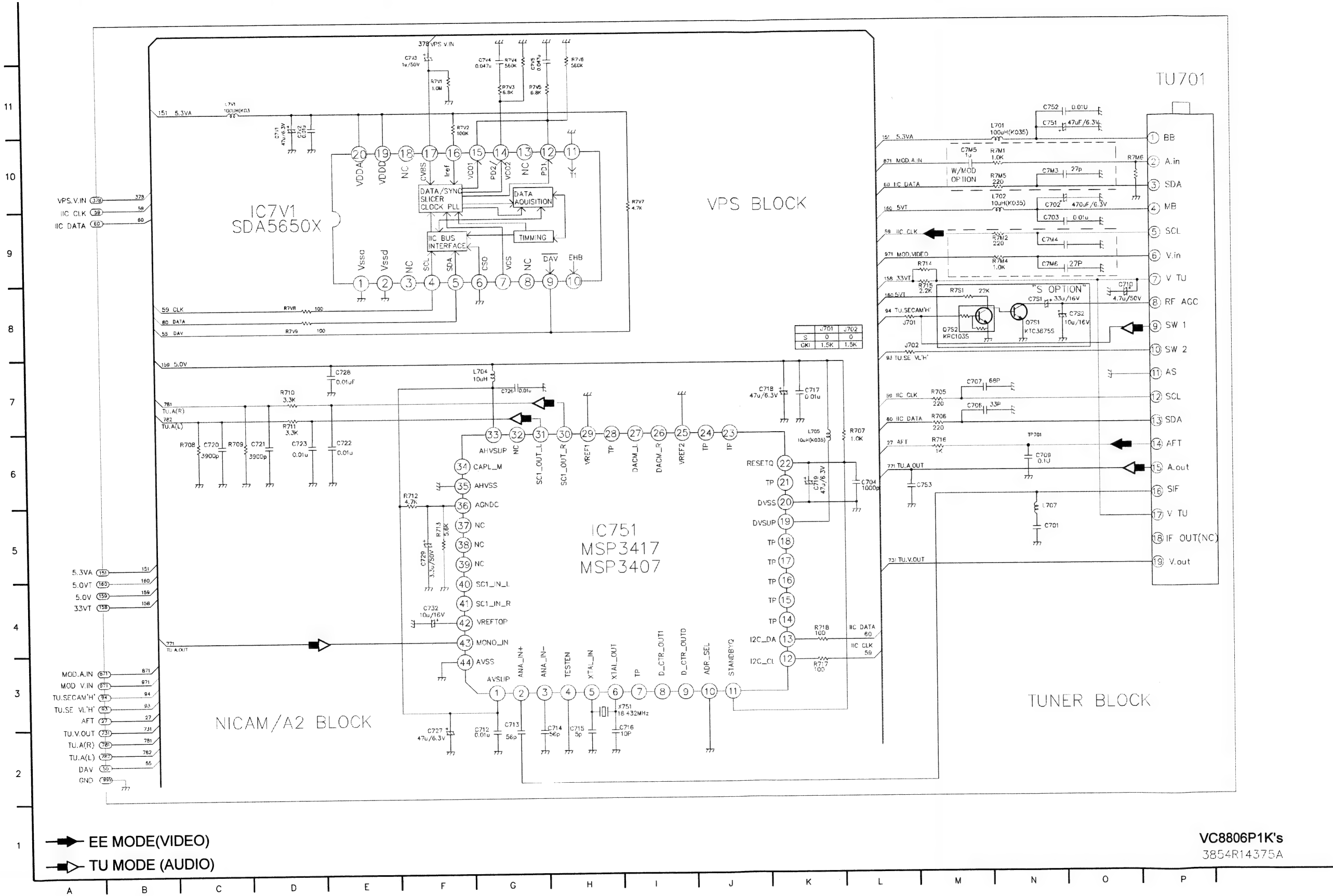
2. Voltages are DC-measured with a digital voltmeter during Play mode.



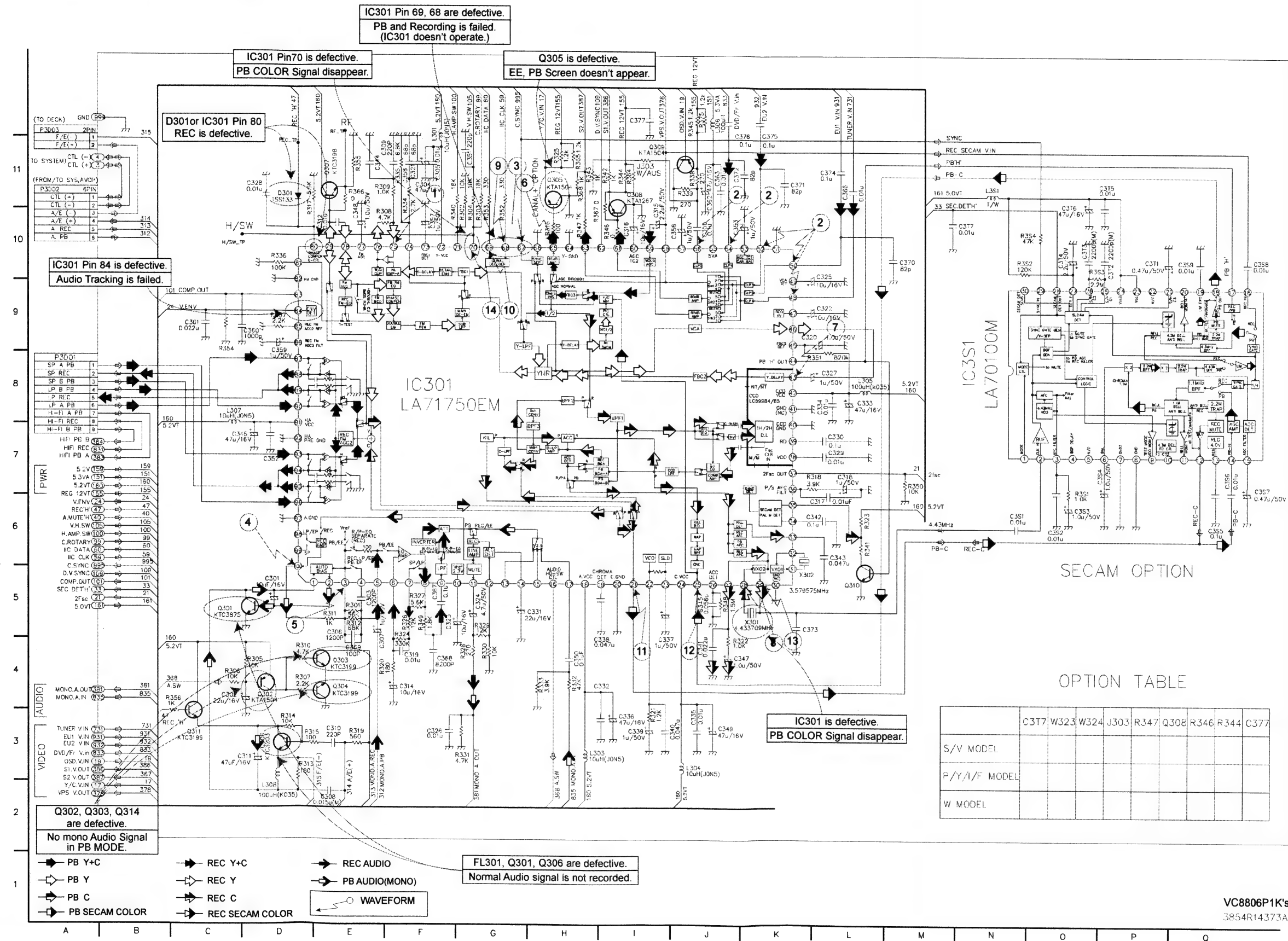
2. POWER(SMPS) CIRCUIT DIAGRAM 2



3. TU/IF, NICAM & A2 CIRCUIT DIAGRAM



4. A/V CIRCUIT DIAGRAM



44 Pin is defective.
Hi-Fi Audio is not appear.

IC801 Pins 42, 43 are defective.
All Audio is not appear.

IC801 TDA9605H

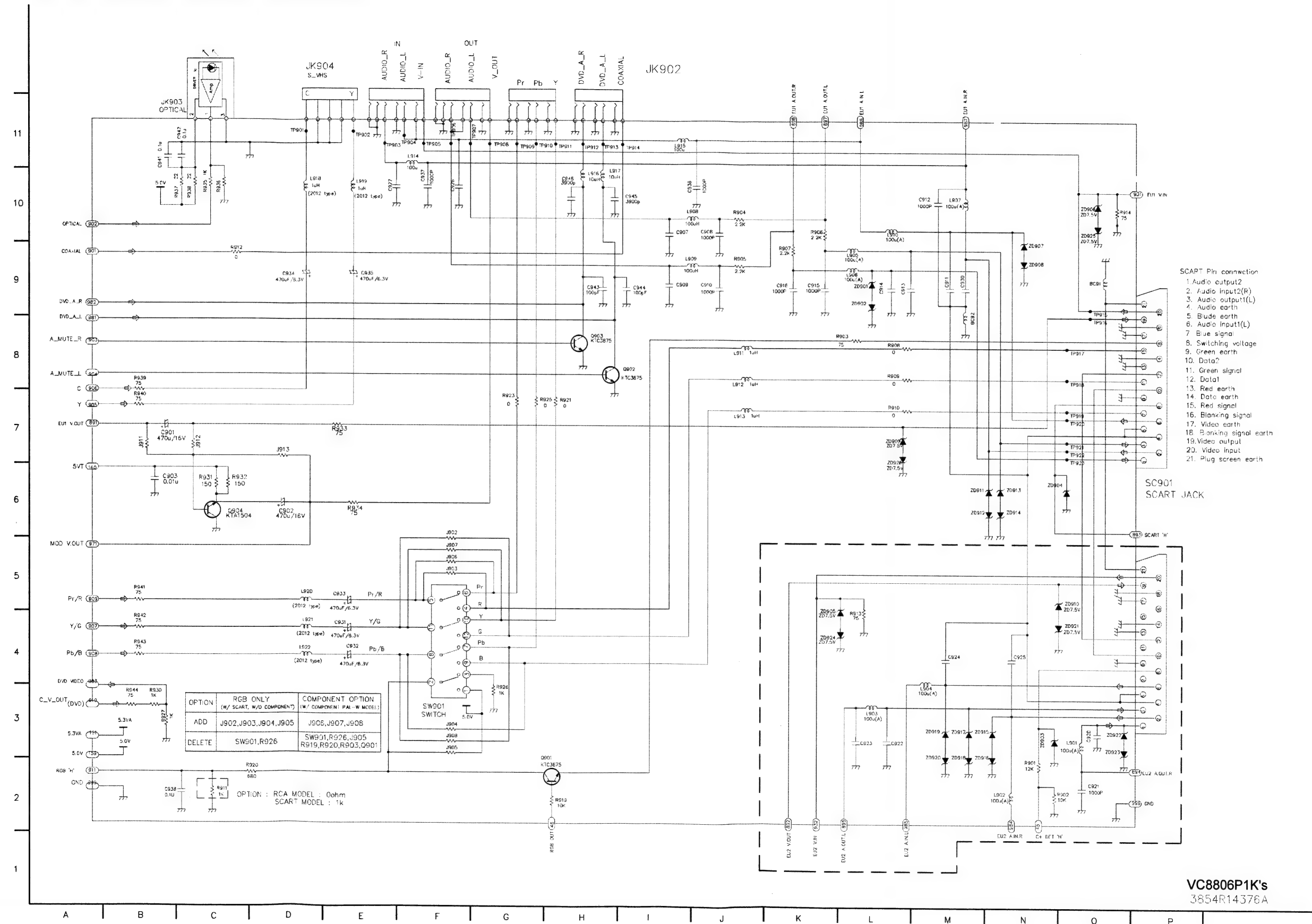
IC802 NM1443

REG 12V T (156)
HIFI PB A (157)
HIFI REC (158)
HIFI PB B (159)
5.2V (160)
A.H./S.W. (161)
IC DATA (162)
IC CLOCK (163)
A ENV (164)

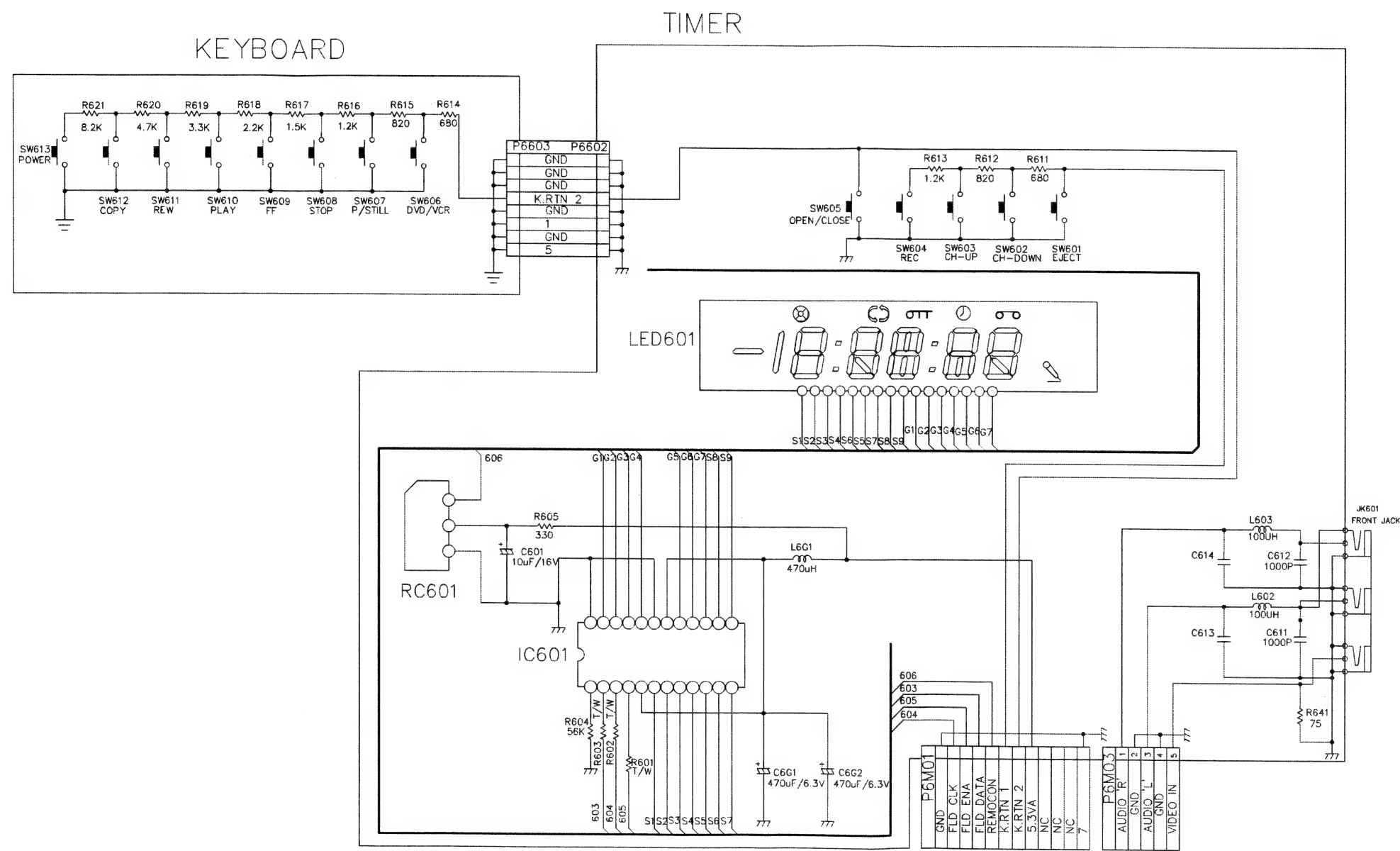
TU A(L) (165)
TU A(R) (166)
DVD A.IN(L) (167)
DVD A.IN(R) (168)
EU1 A.IN(L) (169)
EU1 A.IN(R) (170)
EU2 A.IN(L) (171)
EU2 A.IN(R) (172)
F.A.IN(L) (173)
F.A.IN(R) (174)

HI-FI TP
C807 0.47uF/50V
C808 0.1uF
C809 0.1uF
C810 0.1uF
C811 0.1uF
C812 0.1uF
C813 0.1uF
C814 0.1uF
C815 0.1uF
C816 0.1uF
C817 0.1uF
C818 0.1uF
C819 0.1uF
C820 0.1uF
C821 0.1uF
C822 0.1uF
C823 0.1uF
C824 0.1uF
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6. SCART(JACK) CIRCUIT DIAGRAM



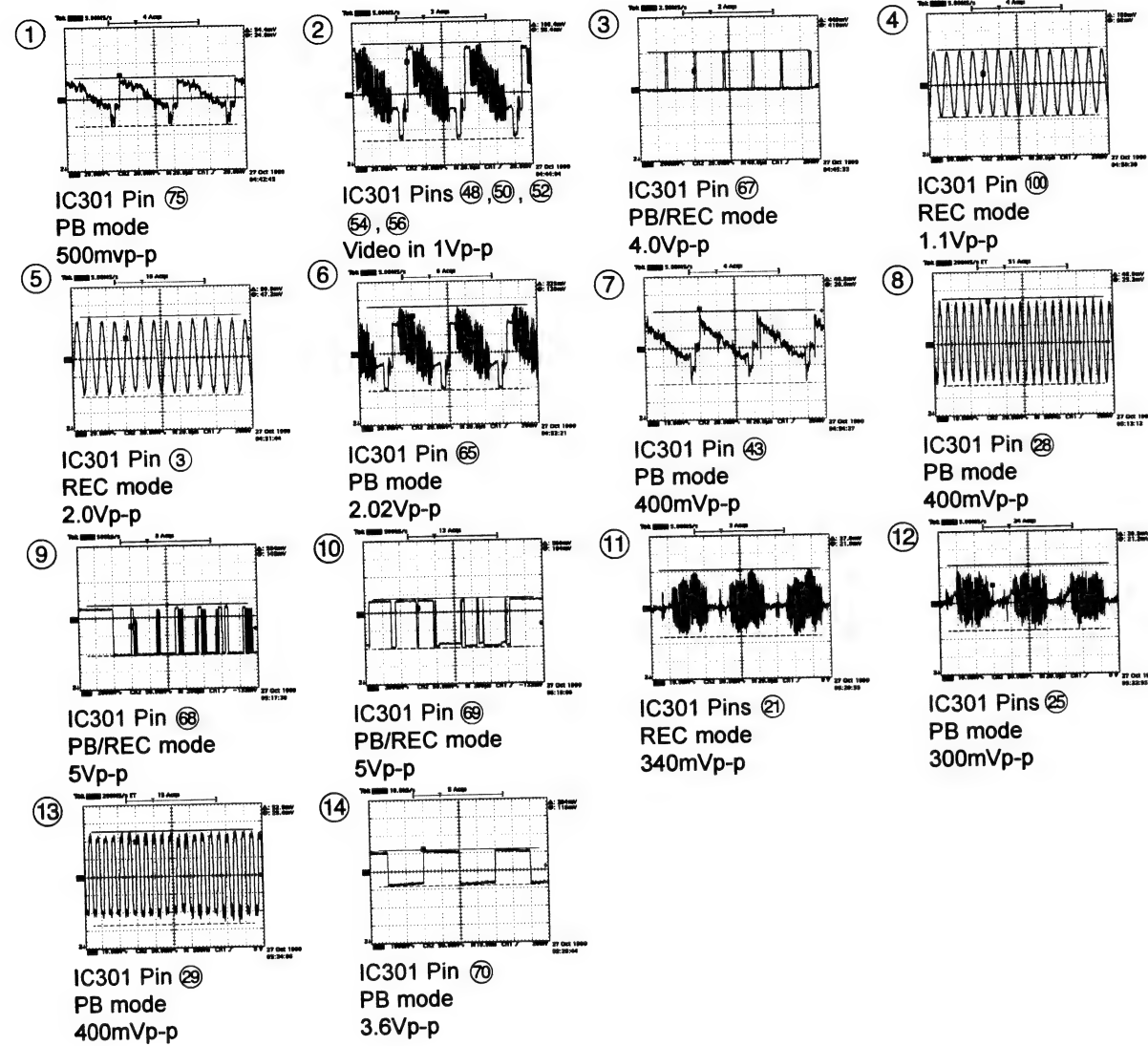
8. TIMER CIRCUIT DIAGRAM



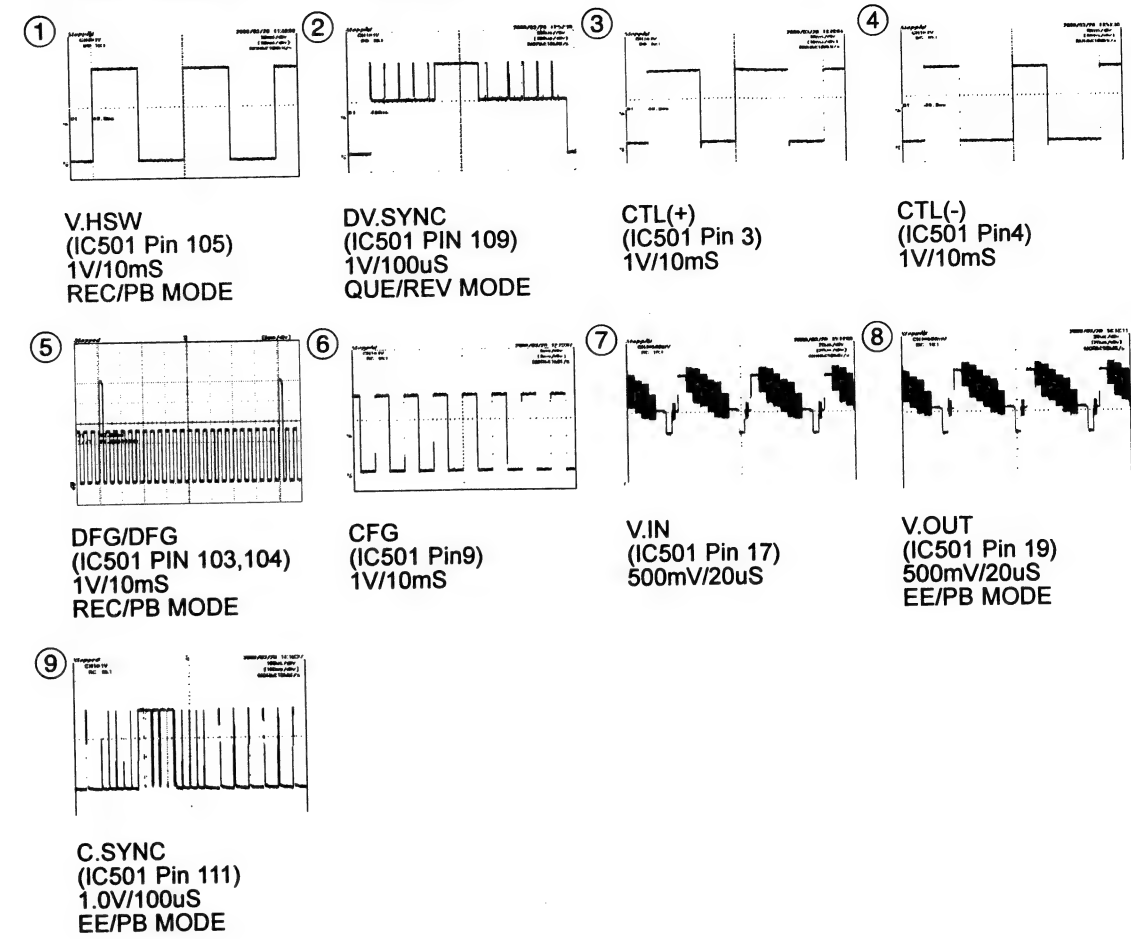
SR15557A

WAVEFORM & VOLTAGE SHEET

★ IC301 Oscilloscope Waveform



* IC501 Waveform Photographs



• CIRCUIT VOLTAGE CHART

MODE PIN NO.	EE	PB	REC
IC201			
1	2.36 V	2.35 V	2.32 V
2	2.4 V	2.35 V	2.4 V
3	3.5 V	3.49 V	3.5 V
4	2.43 V	2.41 V	2.38 V
5	0.002 V	0.005 V	0.006 V
6	0.4 V	3.7 V	0.39 V
7	0.003 V	0.003 V	0.003 V
8	0.003 V	0.003 V	0.003 V
9	2.87 V	2.85 V	2.81 V
10	2.36 V	2.35V	2.32 V
11	3.16 V	3.13 V	3 V
12	3 V	1.7 V	3.03 V
13	4 V	4 V	4 V
14	2.3 V	2.3 V	2.25 V
15	2.98 V	1.78 V	2.93 V
16	3.2 V	3.2 V	3.2 V
17	0.15 V	3.86 V	0.017 V
18	0.124 V	3.38 V	0.127 V
19	2.23 V	2.23 V	2.23 V
20	3 V	3.3 V	3.3 V
21	1.84 V	2.34 V	2.35 V
22	4.71 V	0.002 V	0.007 V
23	4.72 V	4.69 V	4.64 V
24	4.72 V	4.69 V	4.63 V
25	2.37 V	2.26 V	2.37 V
26	2.37 V	2.25 V	2.36 V
27	3 V	2.86 V	3 V
28	0.182 V	0.187 V	0.182 V
29	0.46 V	0.62 V	0.85 V
30	1.95 V	1.94 V	1.91 V
IC301			
1	4.8 V	4.84 V	0.99 V
2	0.11 V	0.014 V	0.81 V
3	2.16 V	2.16 V	2.03 V
4	0.69 V	0.63 V	1.73 V
5	2.15 V	2.15 V	2.26 V
6	2.16 V	2.15 V	2.06 V
7	2.15 V	2.15 V	2.1 V
8	2.15 V	2.15 V	2.1 V
9	2.14 V	2.14 V	2.73 V
10	2.16 V	2.16 V	2.66 V
11	2.23 V	2.27 V	2.8 V
12	1.56 V	0.002 V	2.0 V
13	2.14 V	2.14 V	0.095 V
14	0.022 V	0.022 V	2.05 V
15	2.14 V	2.14 V	2.08 V
16	4.85 V	0.146 V	4.68 V
17	2.14 V	2.14 V	2.09 V
18	4.8 V	4.86 V	4.73 V
19	3.88 V	3.92 V	2.72 V
20	2.31 V	0.003 V	0.006 V
21	3 V	1.68 V	3.02 V
22	3.2 V	2.62 V	3.2 V
23	3.2 V	2.55 V	3.2 V

MODE PIN NO.	EE	PB	REC
24	4.85 V	4.85 V	4.75 V
25	0.121 V	3.4 V	0.19 V
26	1.65 V	1.25 V	1.6 V
27	2.16 V	2.1 V	2.14 V
28	3.75 V	3.7 V	3.66 V
29	2.43 V	2.46 V	2.34 V
30	0.002 V	0.002 V	0.005 V
31	4.76 V	4.58 V	4.72 V
32	4.68 V	4.58 V	4.71 V
33	2.88 V	2.86 V	2.8 V
34	0.061 V	0.06 V	0.061 V
35	3.02 V	2.34 V	2.99 V
36	3.5 V	2.84 V	3.4 V
37	1.7 V	1.76V	1.61 V
38	2 V	2.05 V	1.94 V
39	8.65 V	8.6 V	8.38 V
40	0.002 V	0.003 V	0.006 V
41	0.002 V	0.003 V	0.006 V
42	4.8 V	4.8 V	4.68 V
43	2.4 V	2.67 V	2.17 V
44	13.8 mV	3.86 V	0.03 V
45	2.5 V	2.52 V	2.55 V
46	2.6 V	2.78 V	2.64 V
47	4.14 V	4.14 V	4.14 V
48	3.3 V	3.09 V	3.30 V
49	2.97 V	2.93 V	3.69 V
50	1.93 V	1.92 V	1.92 V
51	0.002 V	0.003 V	0.005 V
52	1.93 V	1.93 V	1.92 V
53	2.33 V	2.33 V	2.34 V
54	1.93 V	1.92 V	1.92 V
55	5.14 V	5.14 V	5.13 V
56	2.24 V	2.57 V	2.22 V
57	1.95 V	2.28 V	0.006 V
58	3 V	2.55 V	3.01 V
59	2.9 V	2.93 V	2.92 V
60	1.47 V	1.54 V	1.48 V
61	1.8 V	2.44 V	1.79 V
62	0.087 V	0.09 V	0.088 V
63	1.8 V	2.55 V	1.78 V
64	0.002 V	0.003 V	0.006 V
65	1.71 V	0.002 V	1.69 V
66	0.002 V	0.003 V	0.006 V
67	0.005 V	0.07 V	0.44 V
68	4.8 V	4.8 V	4.78 V
69	4.7 V	4.7 V	4.7 V
70	7.75 V	2.55 V	5.55 V
71	5.55 V	0.008 V	0.008 V
72	4.84 V	4.8 V	4.72 V
73	2.21 V	2.2 V	2.24 V
74	2.45 V	2.6 V	2.43 V
75	2.38 V	0.72 V	2.38 V
76	2.4 V	0.81 V	2.39 V
77	1.58 V	1.6 V	1.48 V
78	2.44 V	3.35 V	2.33 V

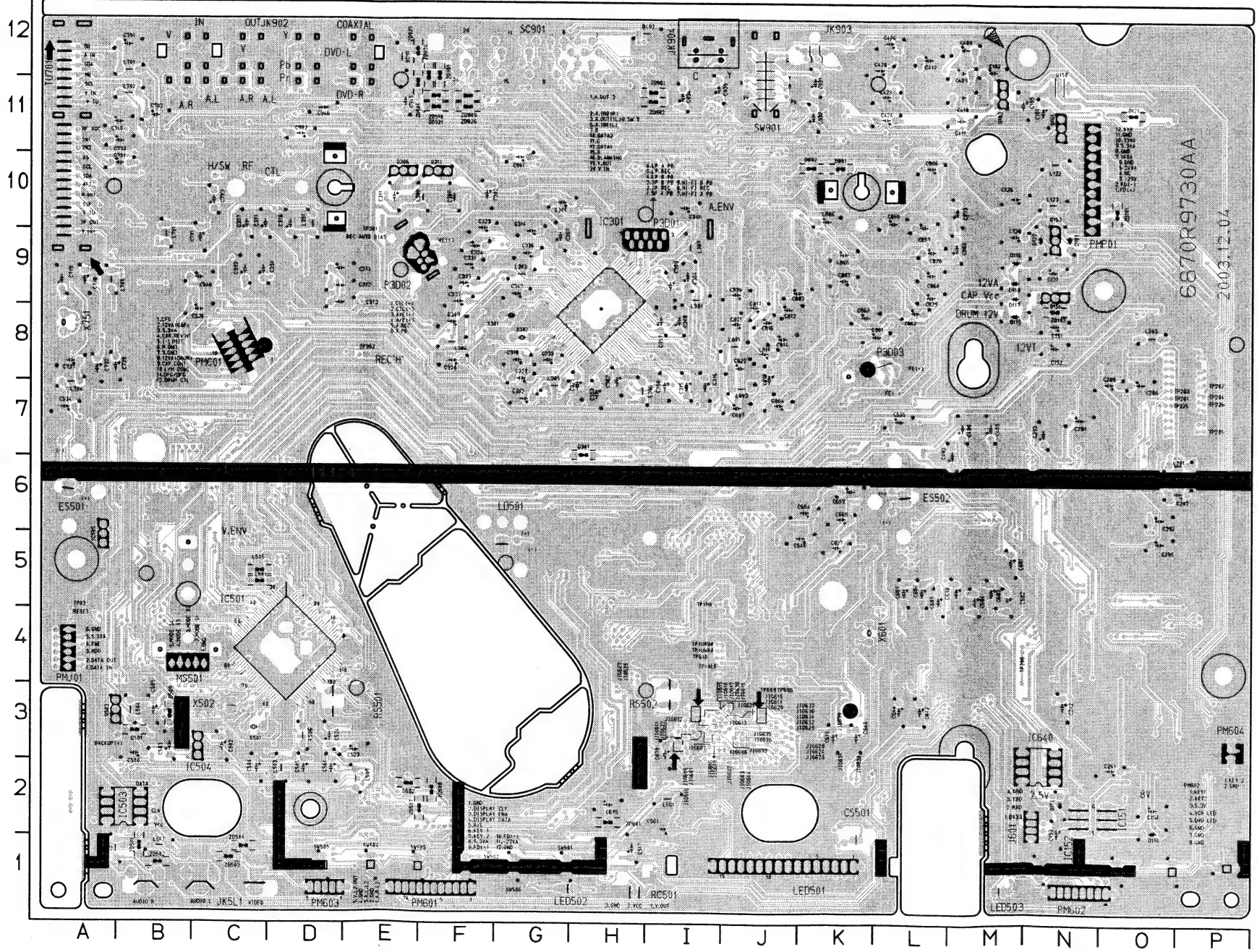
MODE PIN NO.	EE	PB	REC
79	1.73 V	1.67 V	2.51 V
80	0.98 V	0.98 V	4.46 V
81	1.1 V	1.13 V	1.15 V
82	0.003 V	0.004 V	0.006 V
83	1.65 V	1.03 V	1.41 V
84	0.258 V	2.5 V	0.014 V
85	0.002 V	0.003 V	1.38 V
86	0.251 V	0.014 V	1.98 V
87	0.77 V	0.78 V	0.78 V
88	0.77 V	0.78 V	0.77 V
89	0.77 V	0.78 V	0.77 V
90	0.77 V	0.78 V	0.77 V
91	4.85 V	4.83 V	4.74 V
92	2.1 mV	0.004 V	0.006 V
93	1.7 V	1.72 V	3.94 V
94	1.7 V	1.71 V	3.93 V
95	1.7 V	1.71 V	3.92 V
96	1.7 V	1.71 V	3.94 V
97	0.002 V	0.005 V	0.006 V
98	2.16 V	2.16 V	2.21 V
99	2.16V	2.16 V	2.25 V
100	2.16 V	2.16 V	2.31 V
IC5F1			
1	2.33 V	2.31 V	2.3 V
2	4.98 V	4.9 V	4.9 V
3	5 V	5 V	5 V
4	4.96 V	4.9 V	4.9 V
5	4.89 V	4.85 V	4.8 V
6	0.64 V	0.59 V	0.6 V
7	0.64 V	0.59 V	0.6 V
8	0.64 V	0.61 V	0.6 V
9	0.73 V	0.93 V	0.96 V
10	1 V	0.92 V	0.91 V
11	0.72 V	0.63 V	0.92 V
12	1.83 V	1.84 V	1.8 V
13	0.73 V	0.75 V	0.72 V
14	1.26 V	1.22 V	1.2 V
15	1.26 V	1.23 V	1.1 V
16	1.65 V	1.63 V	1.54 V
17	1.58 V	1.58 V	1.42 V
18	4.89 V	4.8 V	4.8 V
19	0.002 V	0.003 V	0.003 V
20	1.75 V	1.63 V	1.5 V
21	1.7 V	1.7 V	1.5 V
22	1.78 V	1.71 V	1.5 V
23	1.73 V	1.6 V	1.41 V
24	0.002 V	0.003 V	0.003 V
IC751			
1	5.1 V	5.1 V	5.08 V
2	1.5 V	1.5 V	1.51 V
3	1.5 V	1.5 V	1.5 V
4	0.002 V	0.003 V	0.003 V
5	2.5 V	2.46 V	2.46 V
6	2.44 V	2.44 V	2.43 V
7	1.84 V	1.89 V	2.06 V

MODE PIN NO.	EE	PB	REC
8	1.86 V	0.004 V	0.004 V
9	1.86 V	0.004 V	0.004 V
10	0.002 V	0.003 V	0.003 V
11	5.12 V	5.12 V	5.11 V
12	4.8 V	4.8 V	4.8 V
13	4.7 V	4.75 V	4.7 V
14	1.75V	2.6 V	2.59 V
15	1.77 V	2.6 V	2.6 V
16	1.77 V	5 V	5 V
17	1.75 V	1.5 V	2.06 V
18	1.75 V	1.5 V	2 V
19	5 V	5 V	5 V
20	0.003 V	0.003 V	0.003 V
21	1.88 V	1.58 V	2 V
22	5.1 V	5.1 V	5.11 V
23	0.002 V	0.005 V	0.004 V
24	0.002 V	0.005 V	0.005 V
25	0.002 V	0.003 V	0.003 V
26	0.05 V	0.051 V	0.051 V
27	0.05 V	0.05 V	0.05 V
28	0.002 V	0.003 V	0.005 V
29	0.002 V	0.003 V	0.003 V
30	2.78 V	2.77 V	2.76 V
31	2.78 V	1.9 V	2.76 V
32	0.002 V	0.003 V	0.005 V
33	5.1 V	5.09 V	5.08 V
34	4.06 V	4.08 V	4.06 V
35	0.003 V	0.003 V	0.003 V
36	2.77 V	2.76 V	2.76 V
37	0.002 V	0.002 V	0.002 V
38	0.002 V	0.003 V	0.002 V
39	0.002 V	0.003 V	0.002 V
40	2.76 V	2.75 V	2.75 V
41	2.76 V	2.75 V	2.75 V
42	2.59 V	2.59 V	2.6 V
43	2.35 V	2.35 V	2.35 V
44	0.003 V	0.003 V	0.003 V
IC501			
1	0.002 V	0.002 V	0.002 V
2	2.56 V	2.55 V	2.55 V
3	2.56 V	2.55 V	2.9 V
4	2.56 V	2.55 V	2 V
5	2.56 V	2.55 V	2.55 V
6	2.56 V	2.56 V	2.55 V
7	2.64 V	2.63 V	2.6 V
8	2.54 V	2.53 V	2.52 V
9	0.064 V	2.27 V	2.26 V
10	5.13 V	5.12 V	5.11 V
11	1.69 V	1.68 V	1.66 V
12	1.7 V	1.7 V	1.67 V
13	2.32 V	2 V	2.3 V
14	0.48 V	0.08 V	0.53 V
15	1.28 V	1.29 V	1.36 V
16	1.84 V	1.83 V	1.8 V
17	2.32 V	3 V	2.26 V

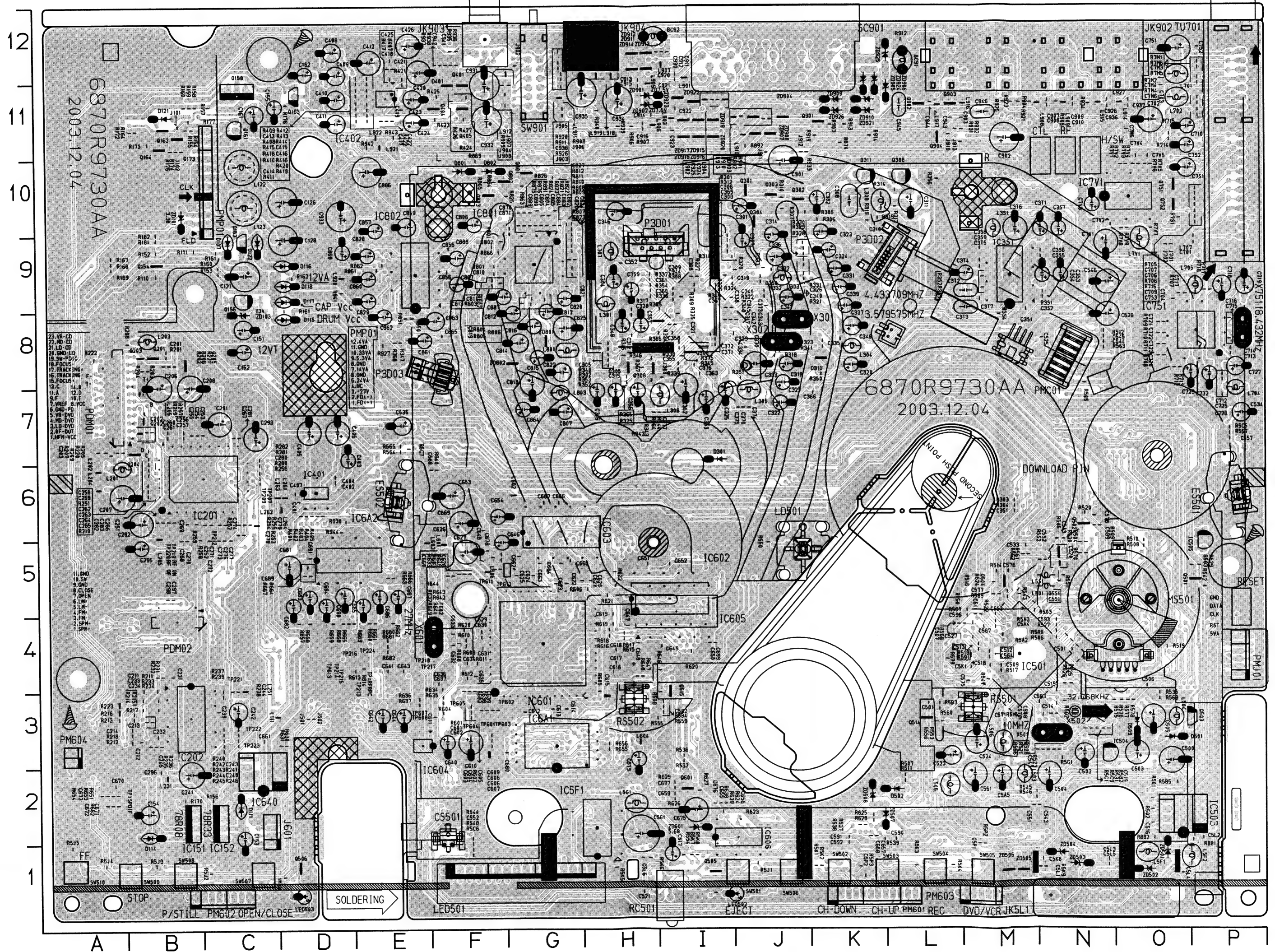
MODE PIN NO.	EE	PB	REC
18	4.7 V	4.7 V	4.6 V
19	2.19 V	3 V	2.13 V
20	0.01 V	0.009 V	0.01 V
21	2.2 V	2.2 V	2.16 V
22	2.32 V	2.3 V	2.26 V
23	0.01 V	0.009 V	0.01 V
24	0.3 V	2.84 V	0.012 V
25	0.08 V	3.4 V	0.068 V
26	5.14 V	5.13 V	5.12 V
27	4.2 V	4.16 V	3.93 V
28	5.13 V	5.13 V	5.11 V
29	5.13 V	5.13 V	5.11 V
30	0.004 V	0.002 V	0.003 V
31	0.002 V	0.002 V	0.002 V
32	0.002 V	0.002 V	0.002 V
33	0.18 V	0.18 V	0.18 V
34	1.37 V	1.3 V	1.42 V
35	5.14 V	5.13 V	5.1 V
36	5.14 V	5.13 V	5.1 V
37	4.74 V	4.73 V	4.7 V
38	4.74 V	4.75 V	4.7 V
39	2.45 V	4.9 V	2.33V
40	5 V	0.003 V	4.96 V
41	2.28 V	1.55 V	1.42 V
42	0.003 V	0.003 V	0.004 V
43	4.76 V	4.75 V	4.73 V
44	0.003 V	0.003 V	0.004 V
45	(-)0.001 V	(-)0.001 V	(-)0.001 V
46	0.003 V	0.003 V	0.004 V
47	0.003 V	0.003 V	5 V
48	0.003 V	0.003 V	0.004 V
49	5.14 V	0~5 V	0.005~5 V
50	5.1 V	0.003 V	0.004 V
51	4.38 V	0.03 V	0.035 V
52	0.031 V	5.06 V	0.038 V
53	0.003 V	0.003 V	0.004 V
54	5.1 V	5 V	5 V
55	5.1 V	5.13 V	5.11 V
56	5.1 V	5.1 V	5.1 V
57	0.002 V	0.002 V	0.002 V
58	0.003 V	0.004 V	0.004 V
59	4.8 V	4.8 V	4.8 V
60	4.7 V	4.7 V	4.9 V
61	4.7 V	5 V	5 V
62	5 V	5 V	5 V
63	1.8 V	1.3 V	1.68 V
64	5.1 V	5 V	5 V
65	1.78 V	5.1 V	1.66 V
66	5.1 V	5.1 V	5.08 V
67	0.004 V	4.4 V	5.08 V
68	0.001 V	5.1 V	0.005 V
69	0.001 V	5.1 V	5.12 V
70	5.14 V	5.1 V	5.12 V
71	5.14 V	0.001 V	0.001 V
72	0.028 V	0.028 V	0.029 V

MODE PIN NO.	EE	PB	REC
73	5 V	5.1 V	5.04 V
74	0.001 V	0.001 V	0.002 V
75	1.5 V	1.93 V	1.48 V
76	1.7 V	2.02 V	1.44 V
77	5.1 V	5.1 V	5.08 V
78	2.5 V	2.51 V	2.52 V
79	0.001 V	0.002 V	0.002 V
80	2.53 V	2.5 V	2.5 V
81	3.2 V	3.2 V	3.19 V
82	5.12 V	5.1 V	5.1 V
83	0.172 V	2.68 V	2.55 V
84	0.004 V	2.4 V	2.69 V
85	0.019 V	3.4 V	3.44 V
86	2.55 V	2.55 V	2.56 V
87	5.11 V	3.1 V	2.29 V
88	5.11 V	4.95 V	4.9 V
89	5.11 V	4.97 V	4.9 V
90	5.11 V	5 V	4.98 V
91	5.11 V	5.1 V	5.09 V
92	5.12 V	0.008-0.05 V	0.006 V
93	0.005 V	0.005 V	0.006 V
94	0.005 V	0.005 V	0.013 V
95	4.38 V	0.05 V	0.012 V
96	0.005 V	0.005 V	0.006 V
97	5.11 V	5.1 V	5.09 V
98	0.005 V	5.3 V	0.006 V
99	5.11 V	2.55 V	2.52 V
100	0.005 V	0.005 V	0.006 V
101	1.51 V	2.6 V	1.31 V
102	0.005 V	0.006 V	0.006 V
103	0.099 V	1.36 V	1.38 V
104	0.099 V	1.36 V	1.36 V
105	5.11 V	2.55 V	2.53 V
106	0.005 V	2.54 V	2.53 V
107	0.005 V	2.75 V	2.75 V
108	0.005 V	2.81 V	2.79 V
109	0.049 V	50.6 V	0.05 V
110	0.002 V	0.002 V	0.002 V
111	0.48 V	0.6 V	0.55 V
112	5.12 V	5.11 V	5.1 V
IC801			
1	3.8 V	3.81 V	3.82 V
2	3.8 V	3.82 V	3.82 V
3	3.8 V	3.82 V	3.82 V
4	3.8 V	3.82 V	3.82 V
5	3.8 V	3.82 V	3.82 V
6	3.8 V	3.82 V	3.82 V
7	3.8 V	3.82 V	3.82 V
8	3.8 V	3.82 V	3.82 V
9	3.8 V	3.82 V	3.82 V
10	3.8 V	3.82 V	3.82 V
11	3.8 V	3.82 V	3.82 V
12	0.054 V	~	0.048 V
13	3.87 V	3.8 V	3.99 V
14	0.008 V	0.003 V	0.004 V

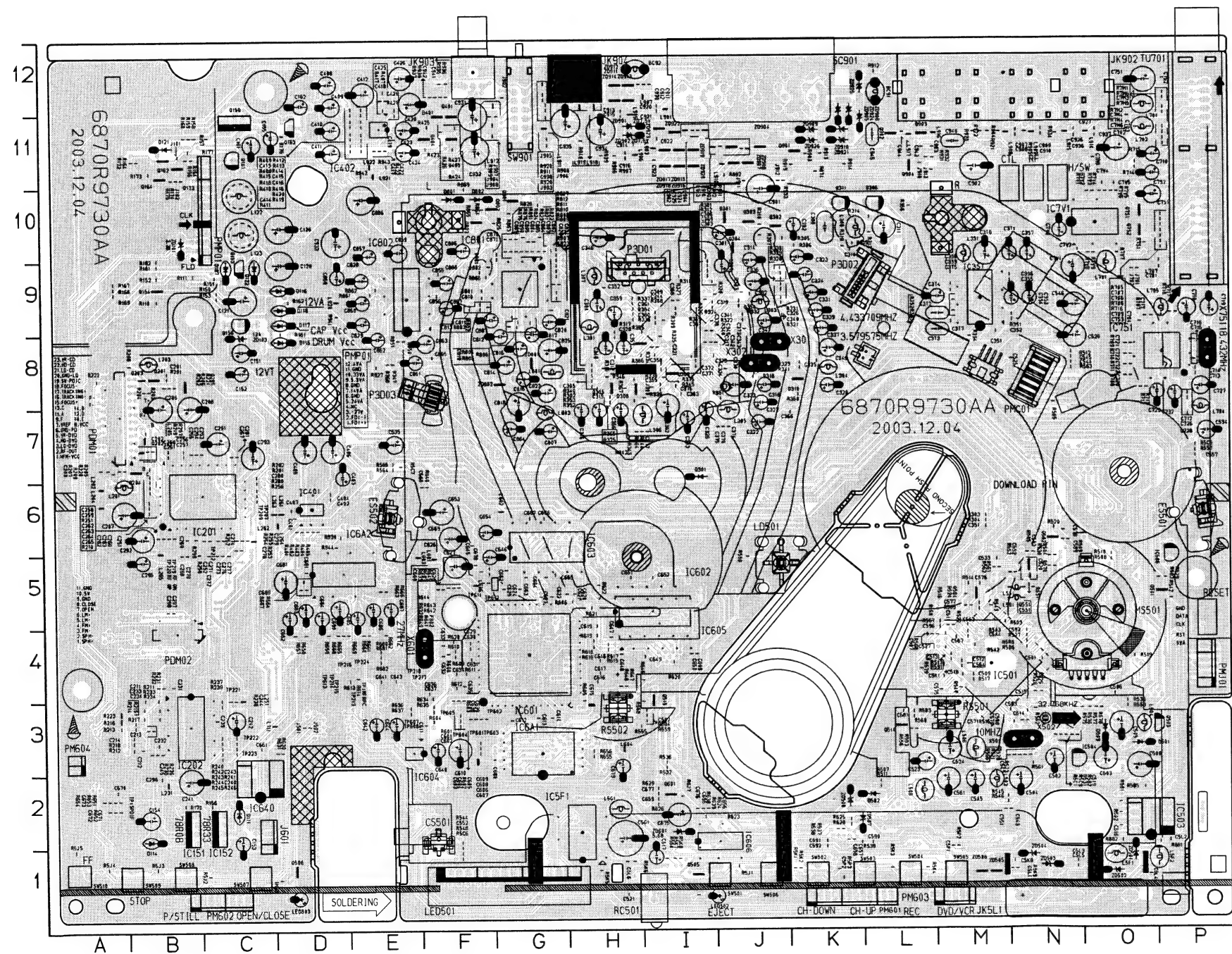
1. MAIN P.C.BOARD (VCR+DVD)_SOLDER SIDE



LOCATION GUIDE			
H/SWP/TP	C10	PIN0244 N6	PIN0332 J5
IC3001	H8	PIN0250 N6	PIN0343 J5
IC501	D4	PIN0251 N7	PIN0459 K4
JIG601 J3		PIN0299 G9	PIN0473 H4
JIG602 J2		PIN0302 G9	PIN0474 H4
JIG603 J2		PIN0303 G9	PIN0475 H4
JIG604 J2		PIN0304 G9	PIN0476 H4
JIG605 J3		PIN0306 L8	PIN0477 H4
JIG606 J3		PIN0307 L8	PIN0478 G4
JIG607 J3		PIN0309 L8	PIN0600 N6
JIG608 J3		PIN0310 L8	PIN0601 N4
JIG609 J3		PIN0311 L8	PIN0602 M6
JIG610 J3		PIN0312 L8	PIN0603 L5
JIG611 J3		PIN0315 L9	REC-1TP
JIG612 J3		PIN0316 L9	RF-1P C10
JIG613 J3		PIN0317 L9	A4
JIG614 J3		PIN0327 D5	P109
JIG615 J3		PIN0328 D5	T100
JIG616 J3		PIN0332 C5	T111
JIG617 J3		PIN0333 C6	T112
JIG618 J3		PIN0335 C5	T201
JIG619 J3		PIN0336 C5	P202
JIG620 J3		PIN0340 C4	P203
JIG621 J3		PIN0342 C5	P204
JIG622 J3		PIN0343 C5	P205
JIG623 J2		PIN0344 C5	P206
JIG624 J3		PIN0350 B4	P225
JIG625 H4		PIN0351 C4	P226
JIG626 J3		PIN0352 B4	P537
JIG627 H4		PIN0353 B4	P606
JIG628 H4		PIN0354 B4	P609
JIG629 J3		PIN0360 D3	P100
JIG630 K2		PIN0363 D3	T701
JIG631 K2		PIN0364 E2	T901
JIG632 J3		PIN0365 E2	T902
JIG633 J3		PIN0366 E2	T903
JIG634 J3		PIN0367 E2	T904
JIG635 J3		PIN0368 E2	T905
JIG636 J3		PIN0369 E4	T906
JIG637 J3		PIN0370 E4	T907
JIG638 J3		PIN0372 D6	T908
JIG639 K3		PIN0411 I5	T909
PIN0010 C5		PIN0414 I5	T910
PIN0012 D4		PIN0415 I5	T911
PIN0013 D4		PIN0416 I5	T912
PIN0043 H9		PIN0418 H9	T913
PIN0054 G8		PIN0418 H8	T914
PIN0062 G9		PIN0419 H4	T915
PIN0064 H8		PIN0420 I5	T916
PIN0066 J9		PIN0421 I6	T917
PIN0071 H7		PIN0422 H4	T918
PIN0072 H8		PIN0423 H4	T919
PIN0086 C3		PIN0424 H5	T920
PIN0098 D4		PIN0425 J4	T921
PIN0100 D3		PIN0427 J5	T922
PIN0107 D2		PIN0427 J5	T923
PIN0121 H2		PIN0428 J5	TP-ALE
PIN0122 G2		PIN0429 J5	TP-A5
PIN0123 F2		PIN0430 J5	TP-UR#1
PIN0243 N6		PIN0431 J5	TP-SUR#14



2. MAIN P.C.BOARD (VCR+DVD)_COMPONENT SIDE



LOCATION GUIDE

9639	L12	9399	J17	C317	NA	C553	NA	C662	05	C816	06	D122	23	L360	11	P0030	87
9640	L12	9400	J17	C318	NA	C554	NA	C663	06	C817	06	D123	23	L361	11	P0031	87
9641	L12	9401	J17	C319	NA	C555	NA	C664	06	C818	06	D124	23	L362	11	P0032	87
9642	L12	9402	J17	C320	NA	C556	NA	C665	06	C819	06	D125	23	L363	11	P0033	87
9643	L12	9403	J17	C321	NA	C557	NA	C666	06	C820	06	D126	23	L364	11	P0034	87
9644	L12	9404	J17	C322	NA	C558	NA	C667	06	C821	06	D127	23	L365	11	P0035	87
9645	L12	9405	J17	C323	NA	C559	NA	C668	06	C822	06	D128	23	L366	11	P0036	87
9646	L12	9406	J17	C324	NA	C560	NA	C669	06	C823	06	D129	23	L367	11	P0037	87
9647	L12	9407	J17	C325	NA	C561	NA	C670	06	C824	06	D130	23	L368	11	P0038	87
9648	L12	9408	J17	C326	NA	C562	NA	C671	06	C825	06	D131	23	L369	11	P0039	87
9649	L12	9409	J17	C327	NA	C563	NA	C672	06	C826	06	D132	23	L370	11	P0040	87
9650	L12	9410	J17	C328	NA	C564	NA	C673	06	C827	06	D133	23	L371	11	P0041	87
9651	L12	9411	J17	C329	NA	C565	NA	C674	06	C828	06	D134	23	L372	11	P0042	87
9652	L12	9412	J17	C330	NA	C566	NA	C675	06	C829	06	D135	23	L373	11	P0043	87
9653	L12	9413	J17	C331	NA	C567	NA	C676	06	C830	06	D136	23	L374	11	P0044	87
9654	L12	9414	J17	C332	NA	C568	NA	C677	06	C831	06	D137	23	L375	11	P0045	87
9655	L12	9415	J17	C333	NA	C569	NA	C678	06	C832	06	D138	23	L376	11	P0046	87
9656	L12	9416	J17	C334	NA	C570	NA	C679	06	C833	06	D139	23	L377	11	P0047	87
9657	L12	9417	J17	C335	NA	C571	NA	C680	06	C834	06	D140	23	L378	11	P0048	87
9658	L12	9418	J17	C336	NA	C572	NA	C681	06	C835	06	D141	23	L379	11	P0049	87
9659	L12	9419	J17	C337	NA	C573	NA	C682	06	C836	06	D142	23	L380	11	P0050	87
9660	L12	9420	J17	C338	NA	C574	NA	C683	06	C837	06	D143	23	L381	11	P0051	87
9661	L12	9421	J17	C339	NA	C575	NA	C684	06	C838	06	D144	23	L382	11	P0052	87
9662	L12	9422	J17	C340	NA	C576	NA	C685	06	C839	06	D145	23	L383	11	P0053	87
9663	L12	9423	J17	C341	NA	C577	NA	C686	06	C840	06	D146	23	L384	11	P0054	87
9664	L12	9424	J17	C342	NA	C578	NA	C687	06	C841	06	D147	23	L385	11	P0055	87
9665	L12	9425	J17	C343	NA	C579	NA	C688	06	C842	06	D148	23	L386	11	P0056	87
9666	L12	9426	J17	C344	NA	C580	NA	C689	06	C843	06	D149	23	L387	11	P0057	87
9667	L12	9427	J17	C345	NA	C581	NA	C690	06	C844	06	D150	23	L388	11	P0058	87
9668	L12	9428	J17	C346	NA	C582	NA	C691	06	C845	06	D151	23	L389	11	P0059	87
9669	L12	9429	J17	C347	NA	C583	NA	C692	06	C846	06	D152	23	L390	11	P0060	87
9670	L12	9430	J17	C348	NA	C584	NA	C693	06	C847	06	D153	23	L391	11	P0061	87
9671	L12	9431	J17	C349	NA	C585	NA	C694	06	C848	06	D154	23	L392	11	P0062	87
9672	L12	9432	J17	C350	NA	C586	NA	C695	06	C849	06	D155	23	L393	11	P0063	87
9673	L12	9433	J17	C351	NA	C587	NA	C696	06	C850	06	D156	23	L394	11	P0064	87
9674	L12	9434	J17	C352	NA	C588	NA	C697	06	C851	06	D157	23	L395	11	P0065	87
9675	L12	9435	J17	C353	NA	C589	NA	C698	06	C852	06	D158	23	L396	11	P0066	87
9676	L12	9436	J17	C354	NA	C590	NA	C699	06	C853	06	D159	23	L397	11	P0067	87
9677	L12	9437	J17	C355	NA	C591	NA	C700	06	C854	06	D160	23	L398	11	P0068	87
9678	L12	9438	J17	C356	NA	C592	NA	C701	06	C855	06	D161	23	L399	11	P0069	87
9679	L12	9439	J17	C357	NA	C593	NA	C702	06	C856	06	D162	23	L400	11	P0070	87
9680	L12	9440	J17	C358	NA	C594	NA	C703	06	C857	06	D163	23	L401	11	P0071	87
9681	L12	9441	J17	C359	NA	C595	NA	C704	06	C858	06	D164	23	L402	11	P0072	87
9682	L12	9442	J17	C360	NA	C596	NA	C705	06	C859	06	D165	23	L403	11	P0073	87
9683	L12	9443	J17	C361	NA	C597	NA	C706	06	C860	06	D166	23	L404	11	P0074	87
9684	L12	9444	J17	C362	NA	C598	NA	C707	06	C861	06	D167	23	L405	11	P0075	87
9685	L12	9445	J17	C363	NA	C599	NA	C708	06	C862	06	D168	23	L406	11	P0076	87
9686	L12	9446	J17	C364	NA	C600	NA	C709	06	C863	06	D169	23	L407	11	P0077	87
9687	L12	9447	J17	C365	NA	C601	NA	C710	06	C864	06	D170	23	L408	11	P0078	87
9688	L12	9448	J17	C366	NA	C602	NA	C711	06	C865	06	D171	23	L409	11	P0079	87
9689	L12	9449	J17	C367	NA	C603	NA	C712	06	C866	06	D172	23	L410	11	P0080	87
9690	L12	9450	J17	C368	NA	C604	NA	C713	06	C867	06	D173	23	L411	11	P0081	87
9691	L12	9451	J17	C369	NA	C605	NA	C714	06	C868	06	D174	23	L412	11	P0082	87
9692	L12	9452	J17	C370	NA	C606	NA	C715	06	C869	06	D175	23	L413	11	P0083	87
9693	L12	9453	J17	C371	NA	C607	NA	C716	06	C870	06	D176	23	L414	11	P0084	87
9694	L12	9454	J17	C372	NA	C608	NA	C717	06	C871	06	D177	23	L415	11	P0085	87
9695	L12	9455	J17	C373	NA	C609	NA	C718	06	C872	06	D178	23	L416	11	P0086	87
9696	L12	9456	J17	C374	NA	C610	NA	C719	06	C873	06	D179	23	L417	11	P0087	87
9697	L12	9457	J17	C375	NA	C611	NA	C720	06	C874	06	D180	23	L418	11	P0088	87
9698	L12	9458	J17	C376	NA	C612	NA	C721	06	C875	06	D181	23	L419	11	P0089	87
9699	L12	9459	J17	C377	NA	C613	NA	C722	06	C876	06	D182	23	L420	11	P0090	87
9700	L12	9460	J17	C378	NA	C614	NA	C723	06	C877	06	D183	23	L421	11	P0091	87
9701	L12	9461	J17	C379	NA	C615	NA	C724	06	C878	06	D184	23	L422	11	P0092	87
9702	L12	9462	J17	C380	NA	C616	NA	C725	06	C879	06	D185	23	L423	11	P0093	87
9703	L12	9463	J17	C381	NA	C617	NA	C726	06	C880	06	D186	23	L424	11	P0094	87
9704	L12	9464	J17	C382	NA	C618	NA	C727	06	C881	06	D187	23	L425	11	P0095	87
9705	L12	9465	J17	C383	NA	C619	NA	C728	06	C882	06	D188	23	L426	11	P0096	87
9706	L12	9466	J17	C384	NA	C620	NA	C729	06	C883	06	D189	23	L427	11	P0097	87
9707	L12	9467	J17	C385	NA	C621	NA	C730	06	C884	06	D190	23	L428	11	P0098	87
9708	L12	9468	J17	C386	NA	C622	NA	C731	06	C885	06	D191	23	L429	11	P0099	87
9709	L12	9469	J17	C387	NA	C623	NA	C732	06	C886	06	D192	23	L430	11	P0100	87
9710	L12	9470	J17	C388	NA	C624	NA	C733	06	C887	06	D193	23	L431	11	P0101	87
9711	L12	9471	J17	C389	NA	C625	NA	C734	06	C888	06	D194	23	L432	11	P0102	87
9712	L12	9472	J17	C390	NA	C626	NA	C735	06	C889	06	D195	23	L433	11	P0103	87
9713	L12	9473	J17	C391	NA	C627	NA	C736	06	C890	06	D196	23	L434	11	P0104	87
9714	L12	9474	J17	C392	NA	C628	NA	C737	06	C891	06	D197	23	L435	11	P0105	87
9715	L12	9475	J17	C393	NA	C629	NA	C738	06	C892	06	D198	23	L436	11	P0106	87
9716	L12	9476	J17	C394	NA	C630	NA	C739	06	C893	06	D199	23	L437	11	P0107	87
9717	L12	9477	J17	C395	NA	C631	NA	C740	06	C894	06	D200	23	L438	11	P0108	87
9718	L12	9478	J17	C396	NA	C632	NA	C741	06	C895	06	D201	23	L439	11	P0109	87
9719	L12	9479	J17	C397	NA	C633	NA	C742	06	C896	06	D202	23	L440	11	P0110	87
9720	L12	9480	J17	C398	NA	C634	NA	C743	06	C897	06	D203	23	L441	11	P0111	87
9721	L12	9481	J17	C399	NA	C635	NA	C744	06	C898	06	D204	23	L442	11	P0112	87
9722	L12	9482	J17	C400	NA	C636	NA	C745	06	C899	06	D205	23	L443	11	P0113	87
9723	L12	9483	J17	C401	NA	C637	NA	C746	06	C900	06	D206	23	L444	11	P0114	87
9724	L12	9484	J17	C402	NA	C638	NA	C747	06	C901	06	D207	23	L445	11	P0115	87
9725	L12	9485	J17	C403	NA	C639	NA	C748	06	C902	06	D208	23	L446	11	P0116	87
9726	L12	9486	J17	C404	NA	C											

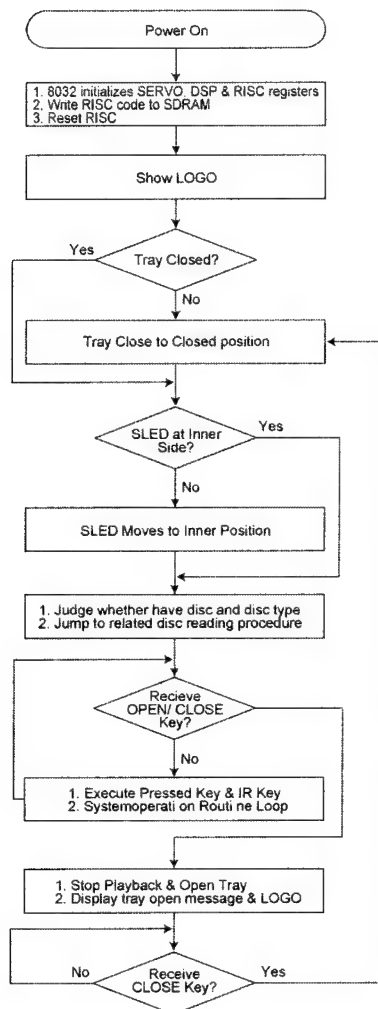
BD101	B4	D118	B2
BD101	C5	F101	A6
C101	B5	F102	B6
C102	C5	T101	B4
C103	C4	T102	A3
C104	B4	T103	A2
C105	C4	L102	C6
C106	C4	L124	B2
C109	AD	P101	A3
C110	D6	P120	C1
C111	A3	P150	B5
C117	B1	R101	A5
C123	C2	R101	C4
C127	A1	R104	C4
C129	B2	R105	A4
C131	B2	R112	A2
C132	A2	R113	A3
C133	A2	R114	A2
C135	B5	R115	A2
C163	B2	R116	A2
D101	C3	R117	A2
D102	A4	R119	A3
D106	C3	R124	B5
D110	C2	R130	C2
D111	A2	R133	C2
D112	B2	T101	B3
D113	A3	Y101	A5

(7TOOL)

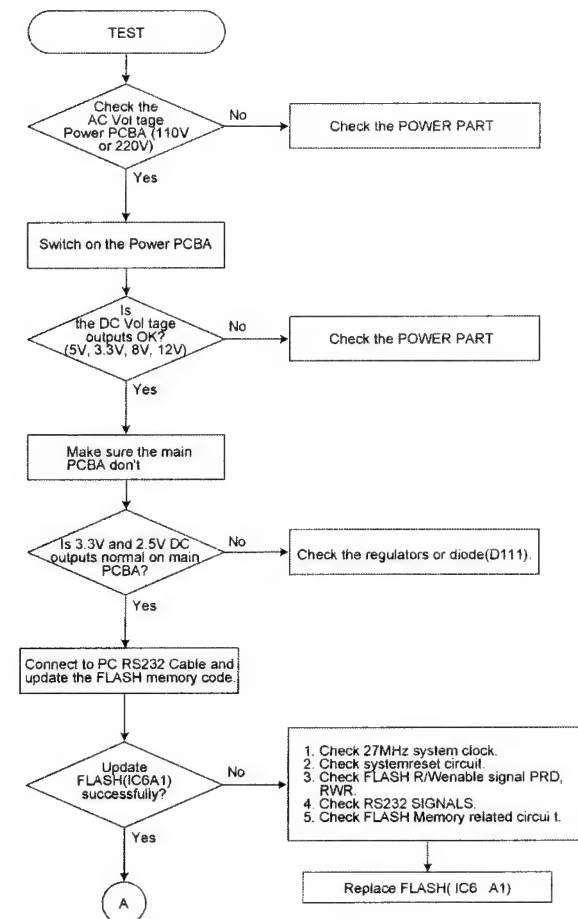


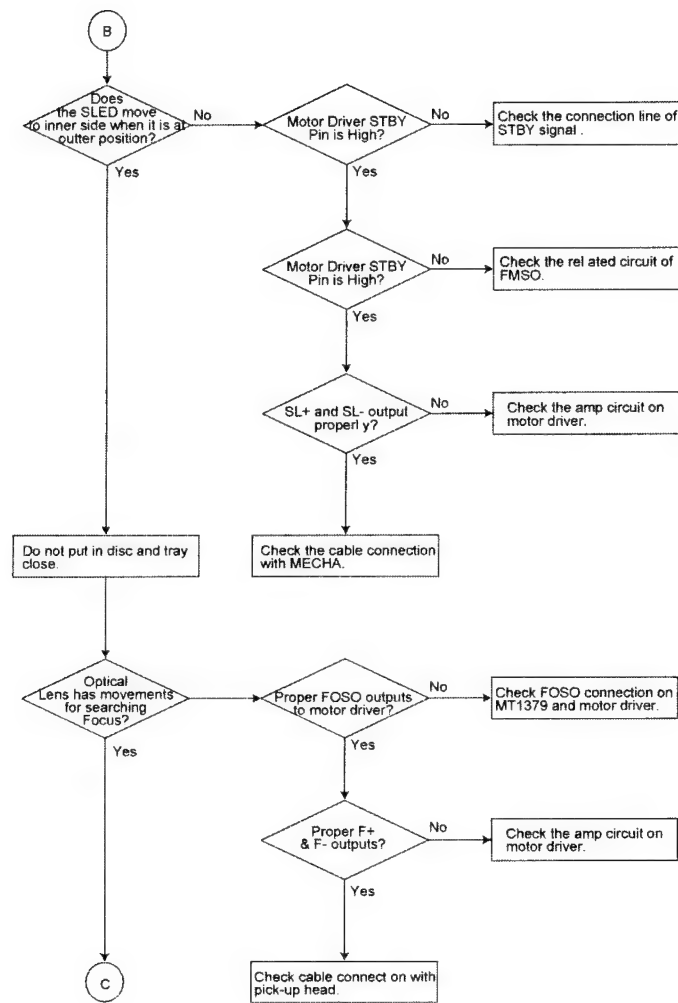
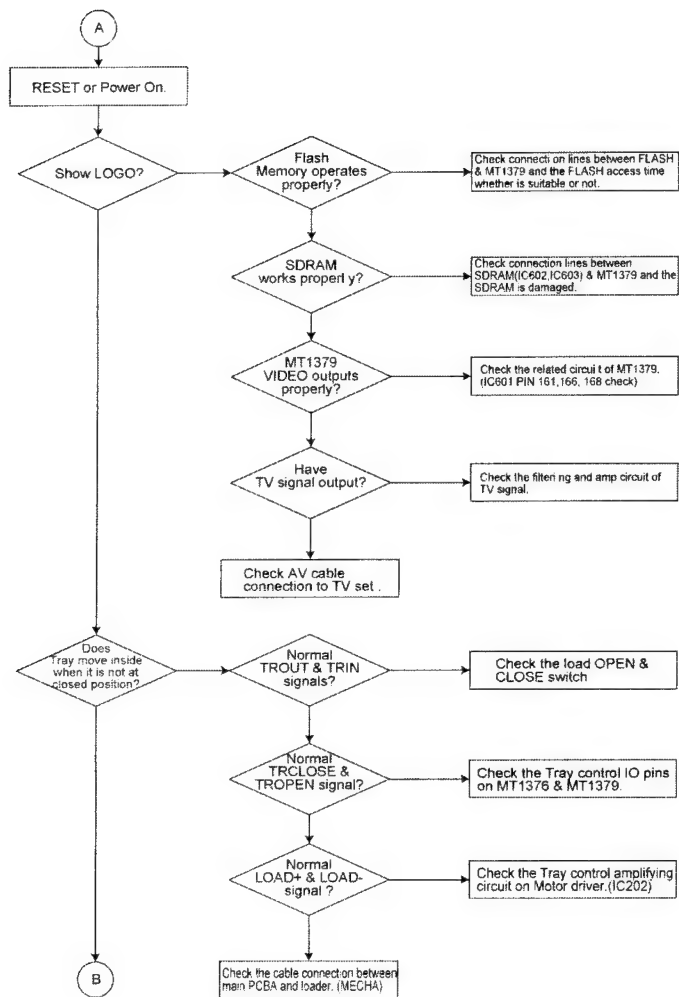
DVD PART ELECTRICAL TROUBLESHOOTING GUIDE

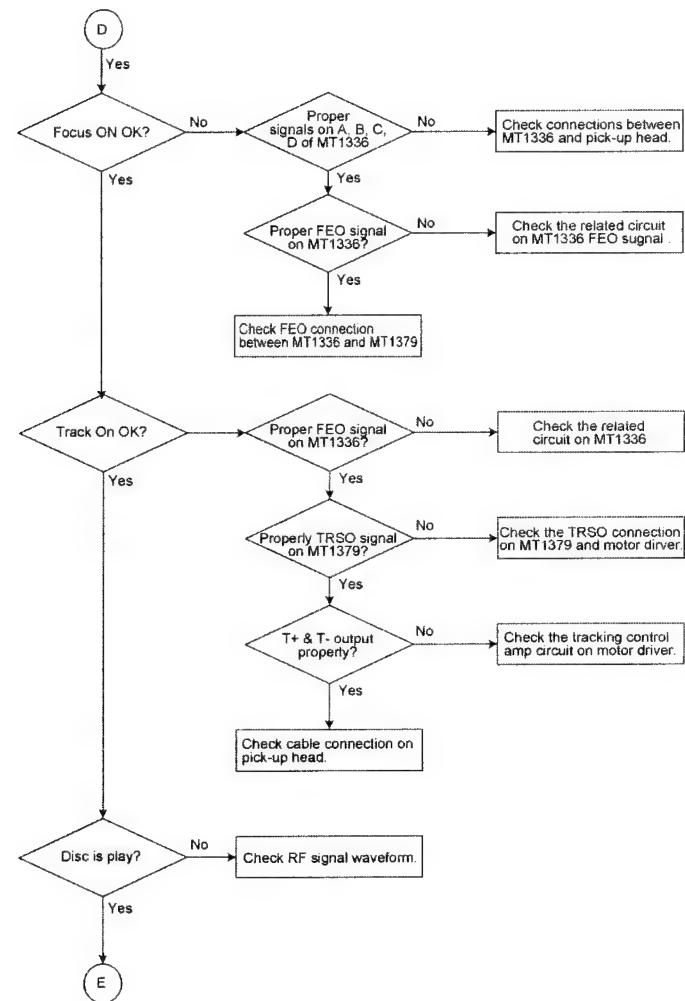
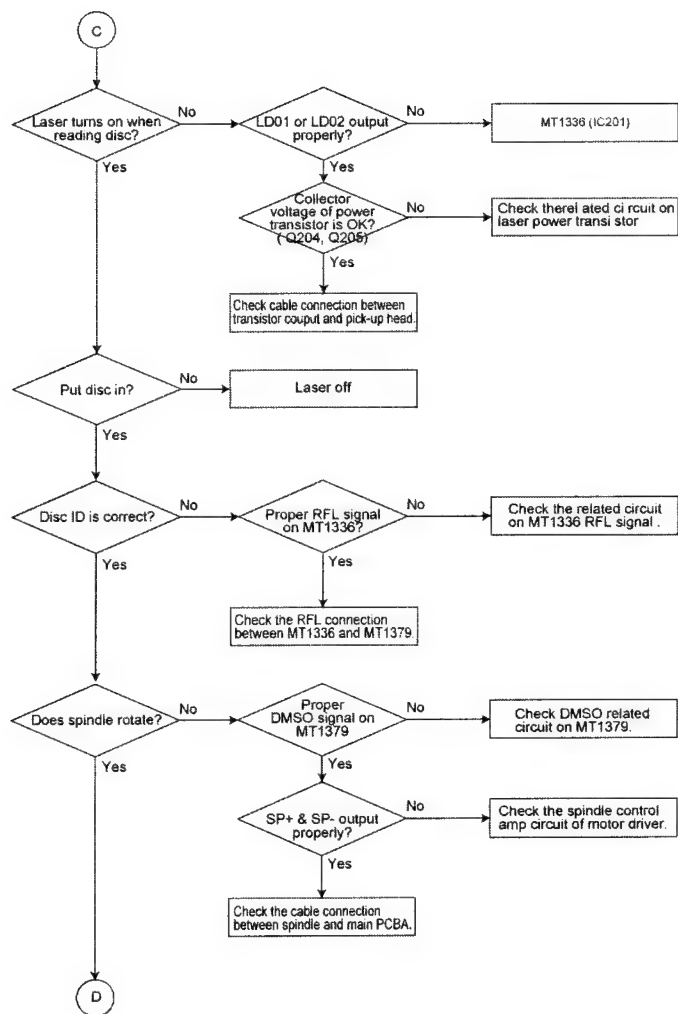
1. System operation flow

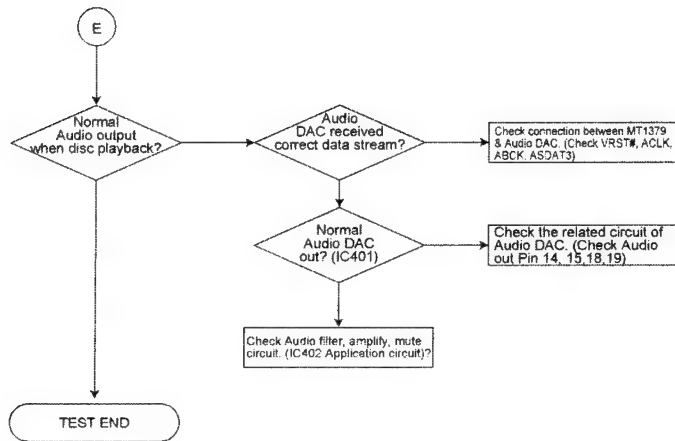


2. Test & debug flow









DETAILS AND WAVEFORMS ON SYSTEM TEST AND DEBUGGING

1. SYSTEM 27MHz CLOCK,RESET,FLASH R/W SIGNAL

1) MT1379 main clock is at 27MHz(X501)

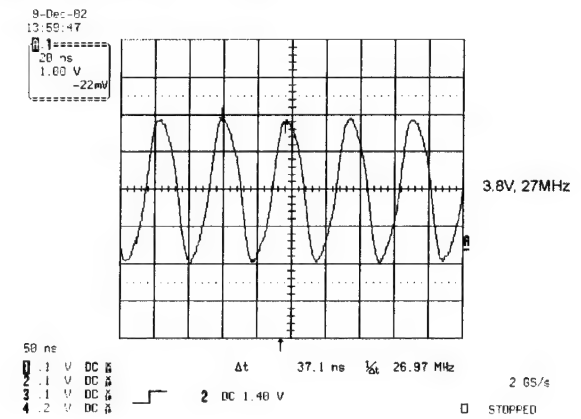


FIG 1-1

2) MT1379 & MT1336 reset is high active.

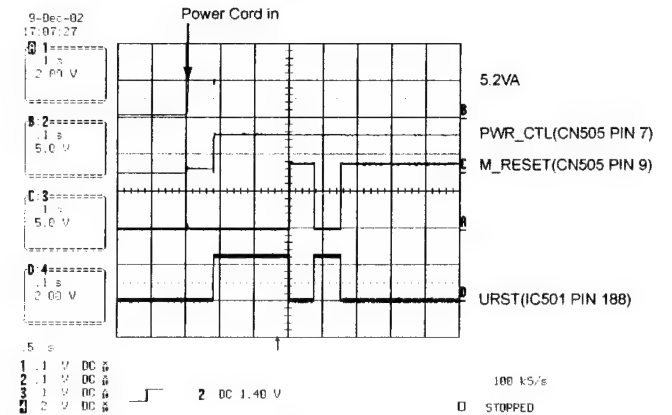


FIG 1-2

3) RS232 waveform during procedure(Downloading)

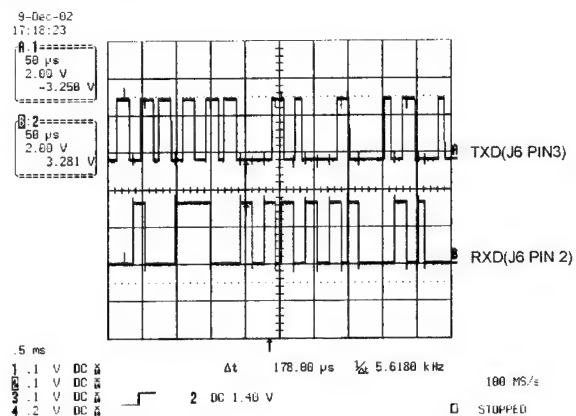


FIG 1-3

4) Flash R/W enable signal during download(Downloading)

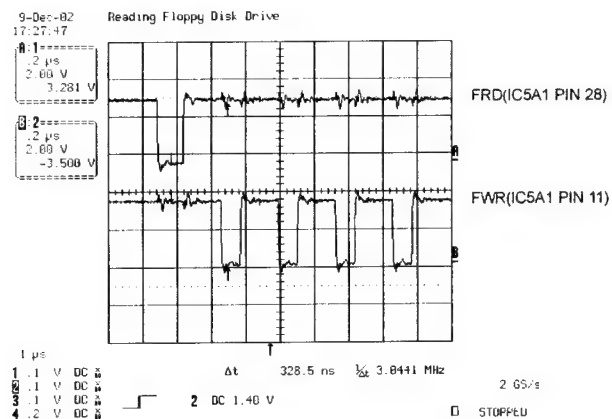


FIG 1-4

2. SDRAM CLOCK

1) MT1379 main clock is at 27MHz(X501)

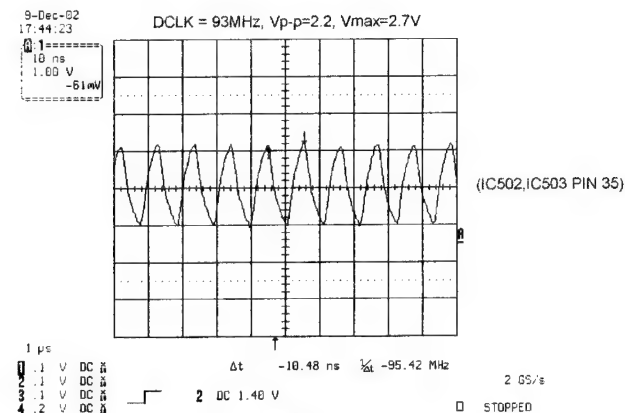


FIG 2-1

3. TRAY OPEN/CLOSE SIGNAL

1) Tray open/close waveform

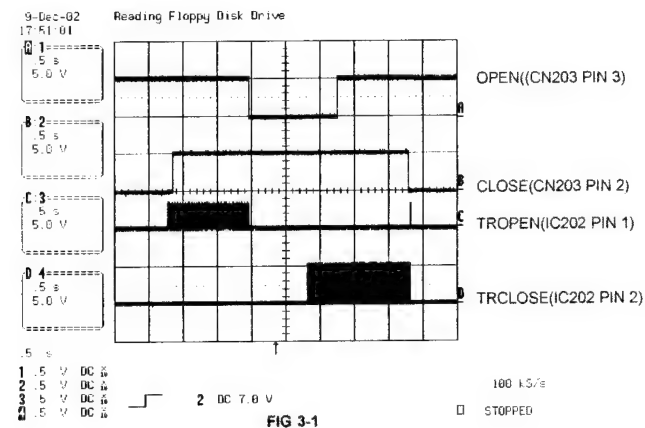


FIG 3-1

2) Tray close waveform

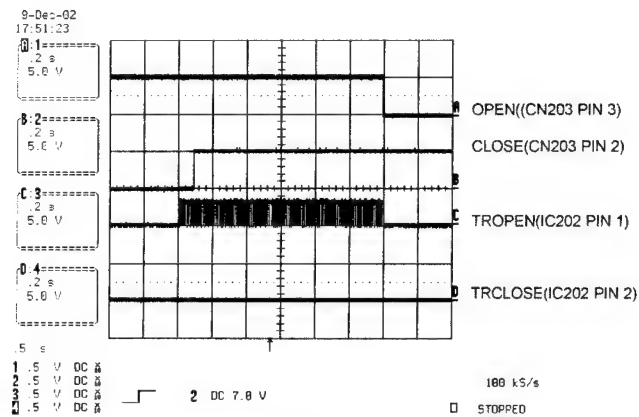


FIG 3-2

3) Tray open waveform

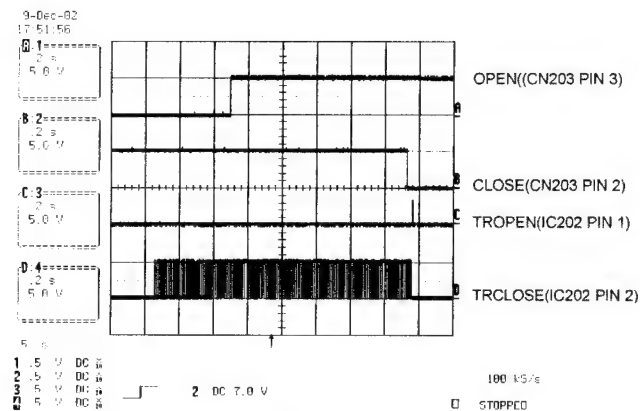


FIG 3-3

4. SLED CONTROL RELATED SIGNAL (NO DISC CONDITION)

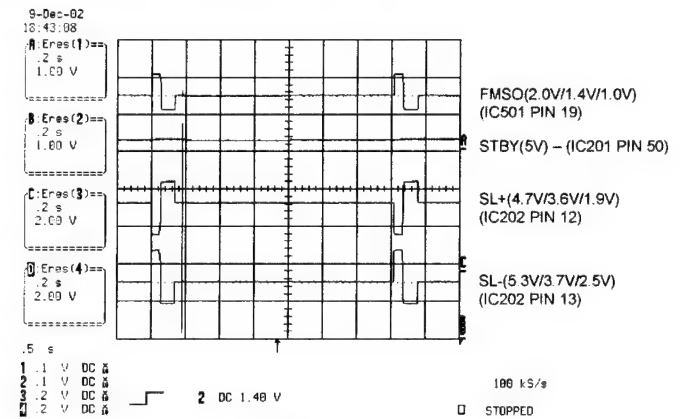


FIG 4-1

5. LENS CONTROL RELATED SIGNAL (NO DISC CONDITION)

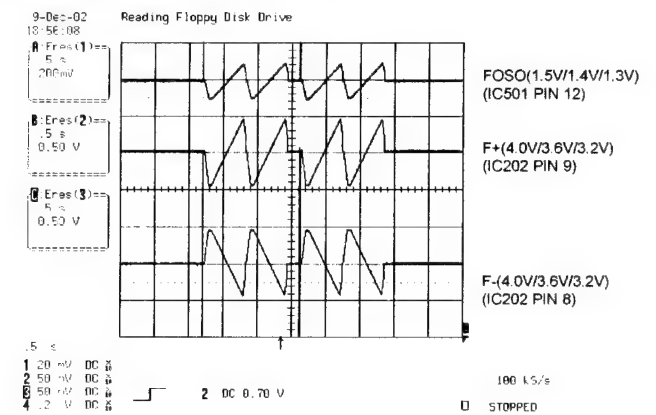


FIG 5-1

6. LASER POWER CONTROL RELATED SIGNAL(NO DISC CONDITION)

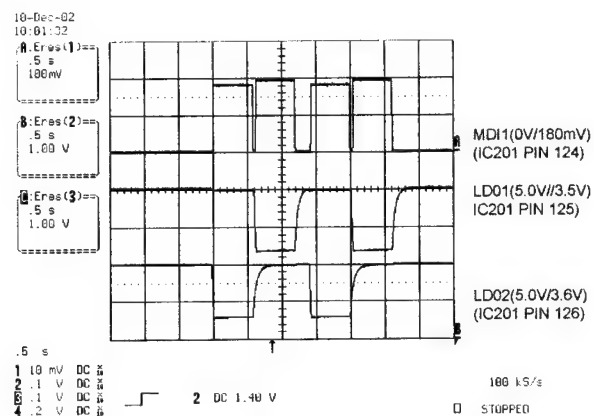


FIG 6-1

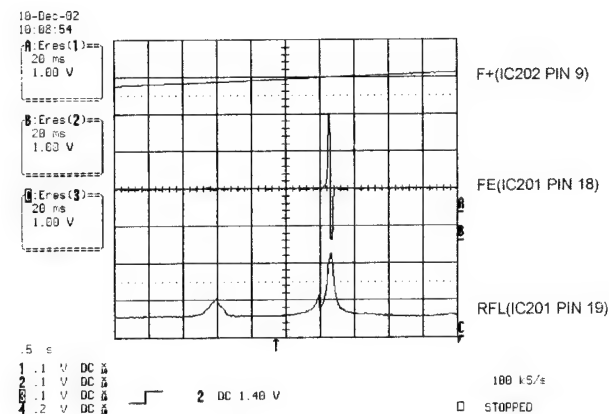


FIG 7-2 (DVD)

7. DISC TYPE JUDGEMENT WAVEFORM

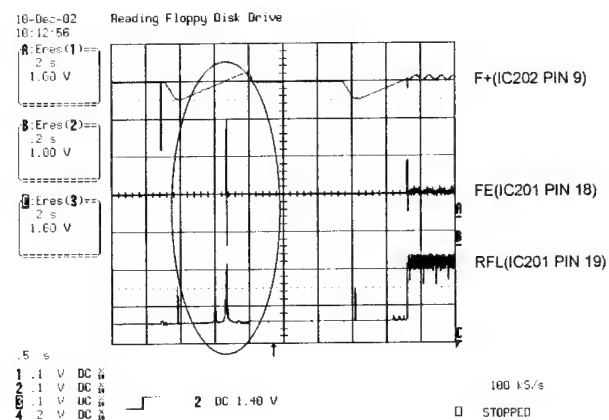


FIG 7-1 (DVD)

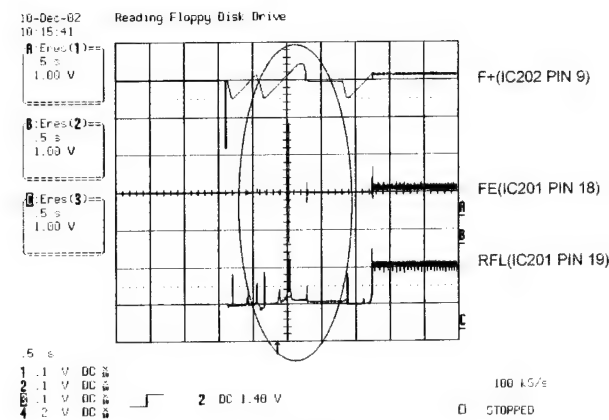


FIG 7-3 (CD)

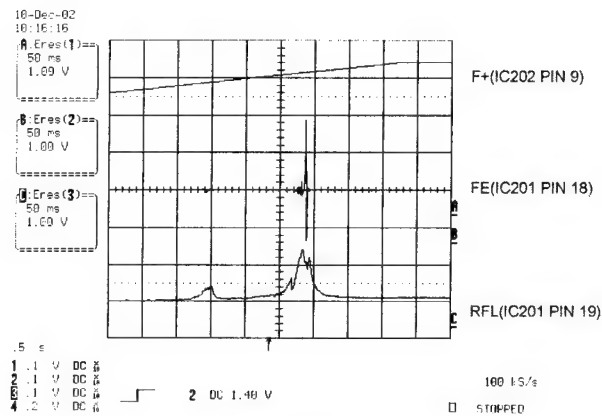


FIG 7-4 (CD)

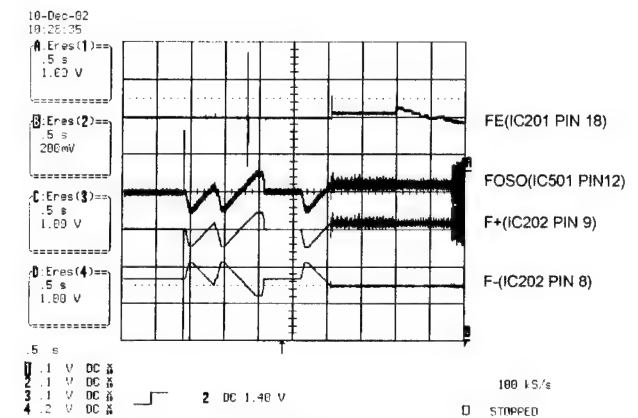


FIG 8-2 (CD)

8. FOCUS ON WAVEFORM

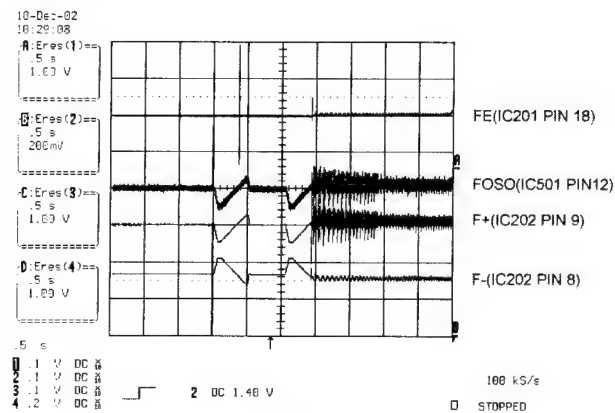


FIG 8-1 (DVD)

3-74

9. SPINDLE CONTROL WAVEFORM (NO DISC CONDITION)

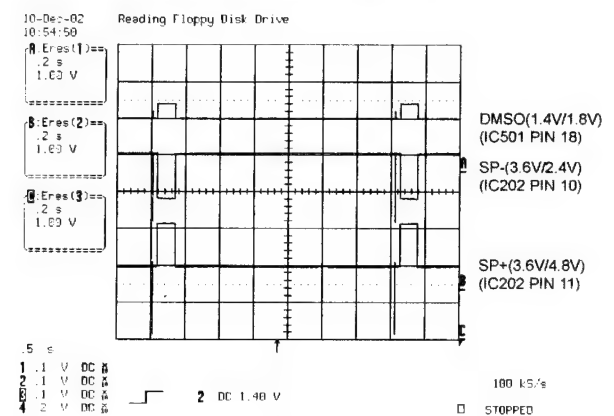


FIG 9-1

3-75

10. TRACKING CONTROL RELATED SIGNAL(System checking)

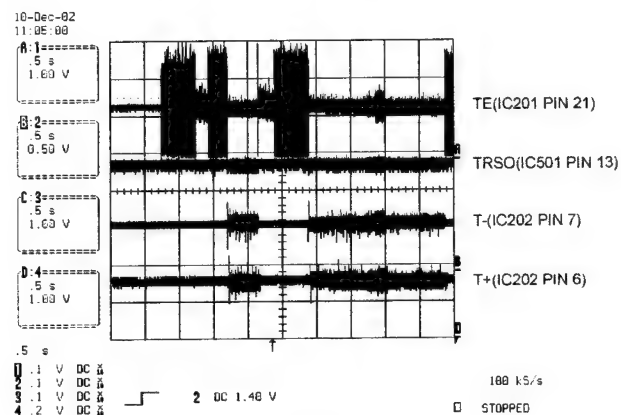


FIG 10-1(DVD)

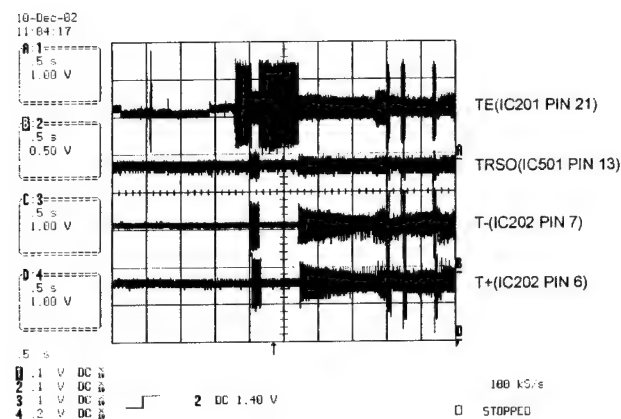


FIG 10-2(CD)

11. RF WAVEFORM

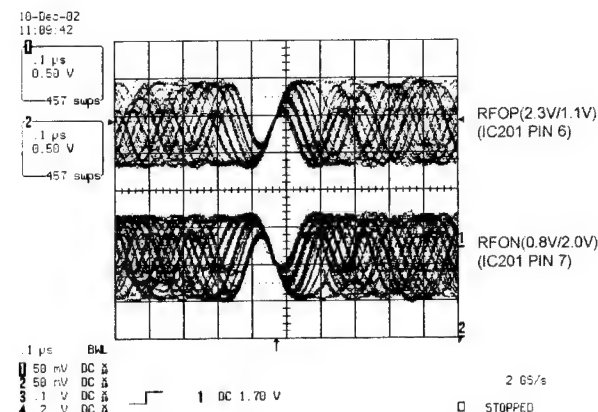


FIG 11-1

12. MT1379 AUDIO OPTICAL AND COAXIAL OUTPUT (ASPDIF)

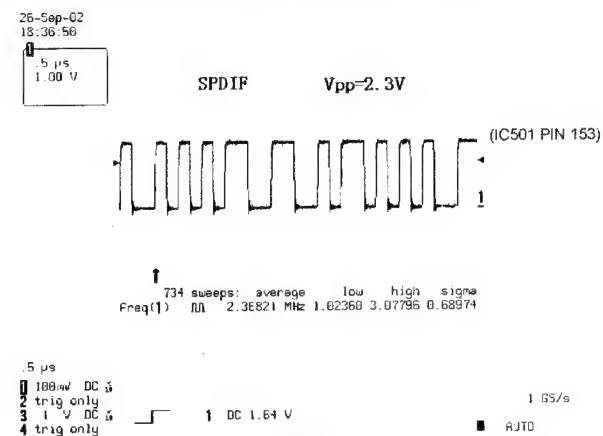


FIG 12-1

13. MT1379 VIDEO OUTPUT WAVEFORM

1) Full colorbar signal(CVBS)

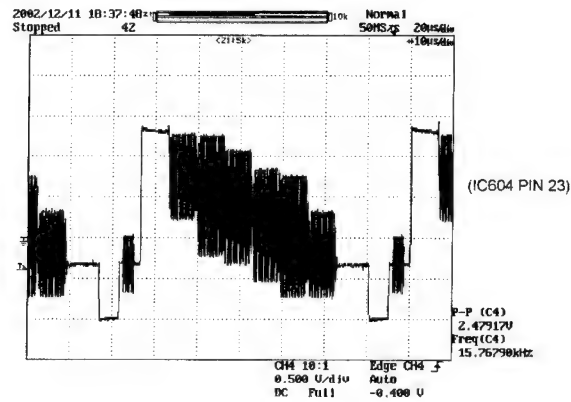


FIG 13-1

2) Y

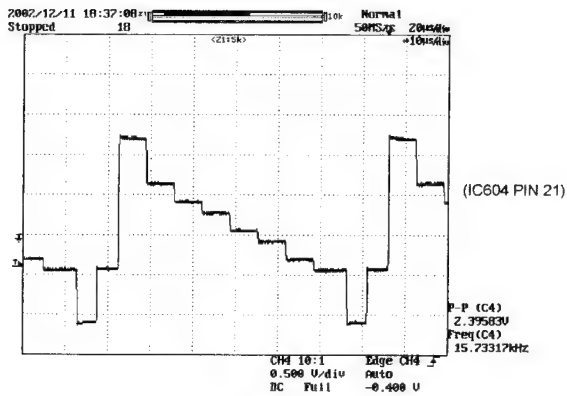


FIG 13-2

3) C

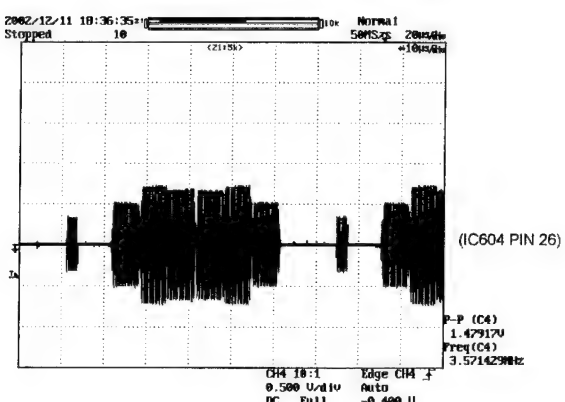


FIG 13-3

14. AUDIO OUTPUT FROM AUDIO DAC

1) Audio L/R

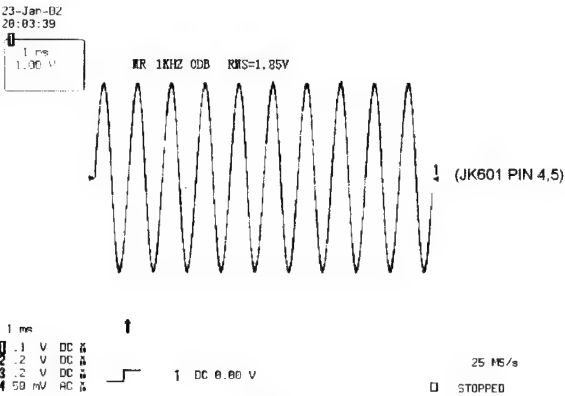


FIG 14-1

2) Audio related Signal

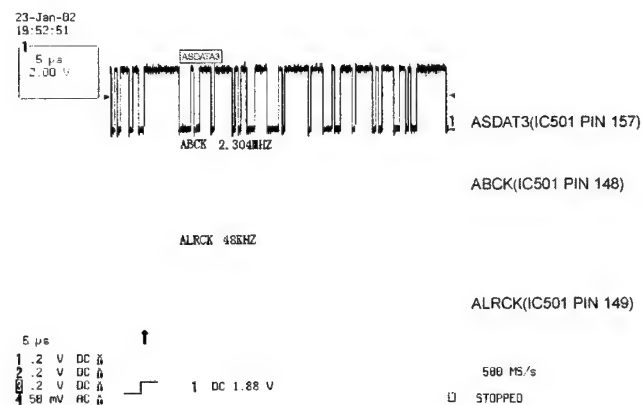
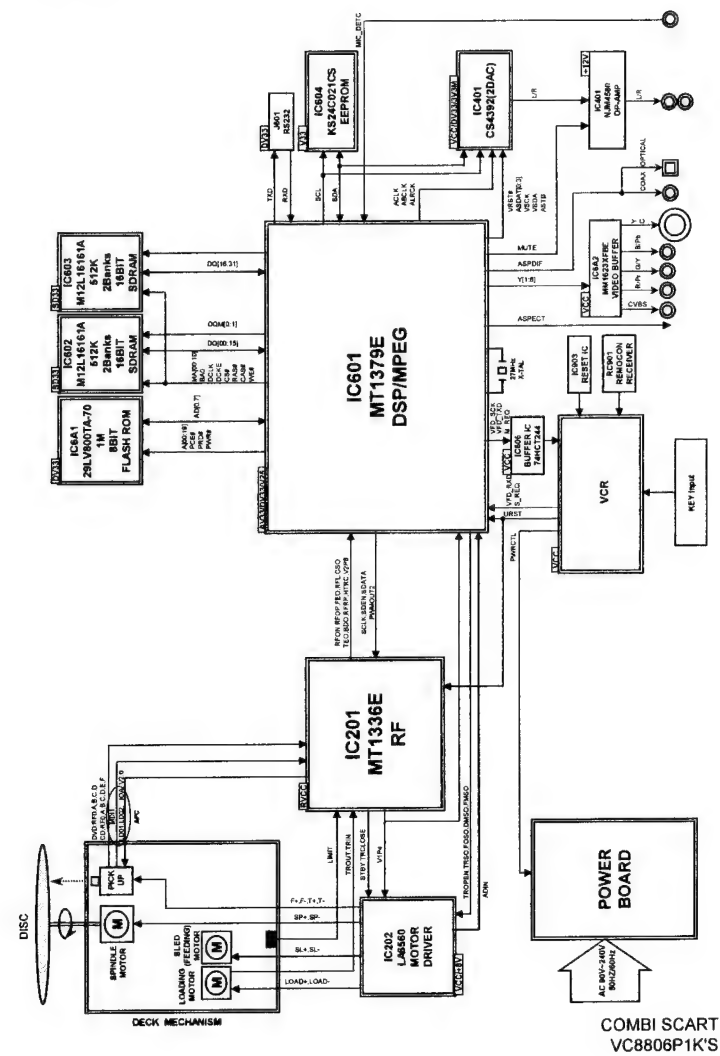


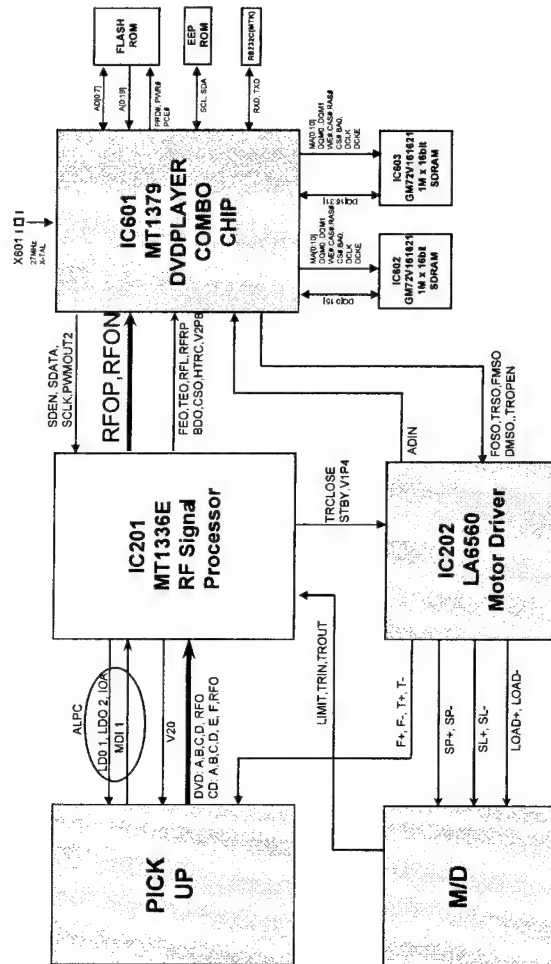
FIG 14-2

BLOCK DIAGRAMS

1. Overall Block Diagram

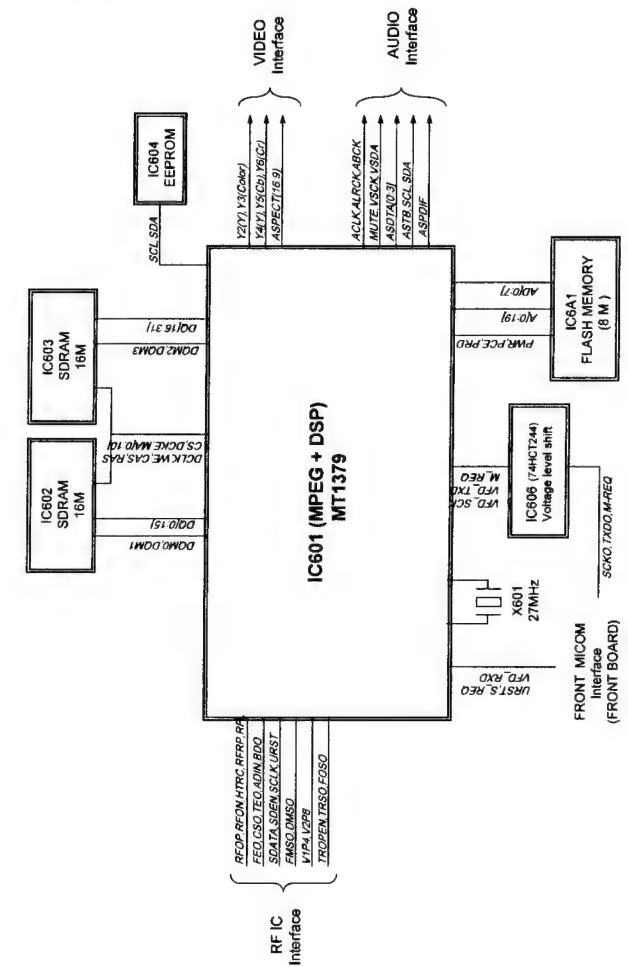


2. SERVO Block Diagram



COMBI SCART
VC8806P1K'S

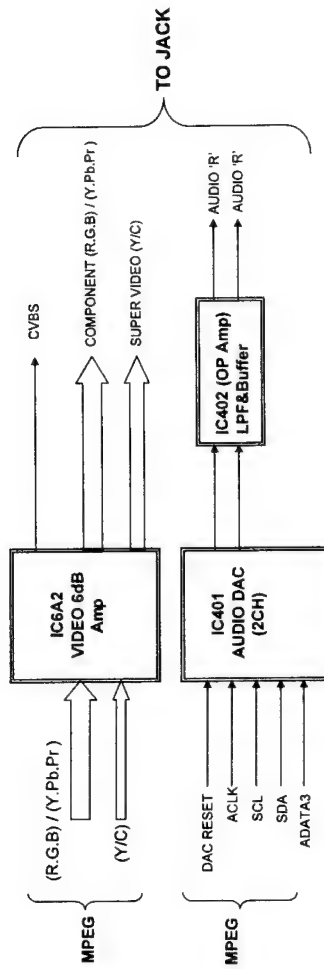
3. MPEG & MEMORY Block Diagram



COMBI SCART
VC8806P1K'S

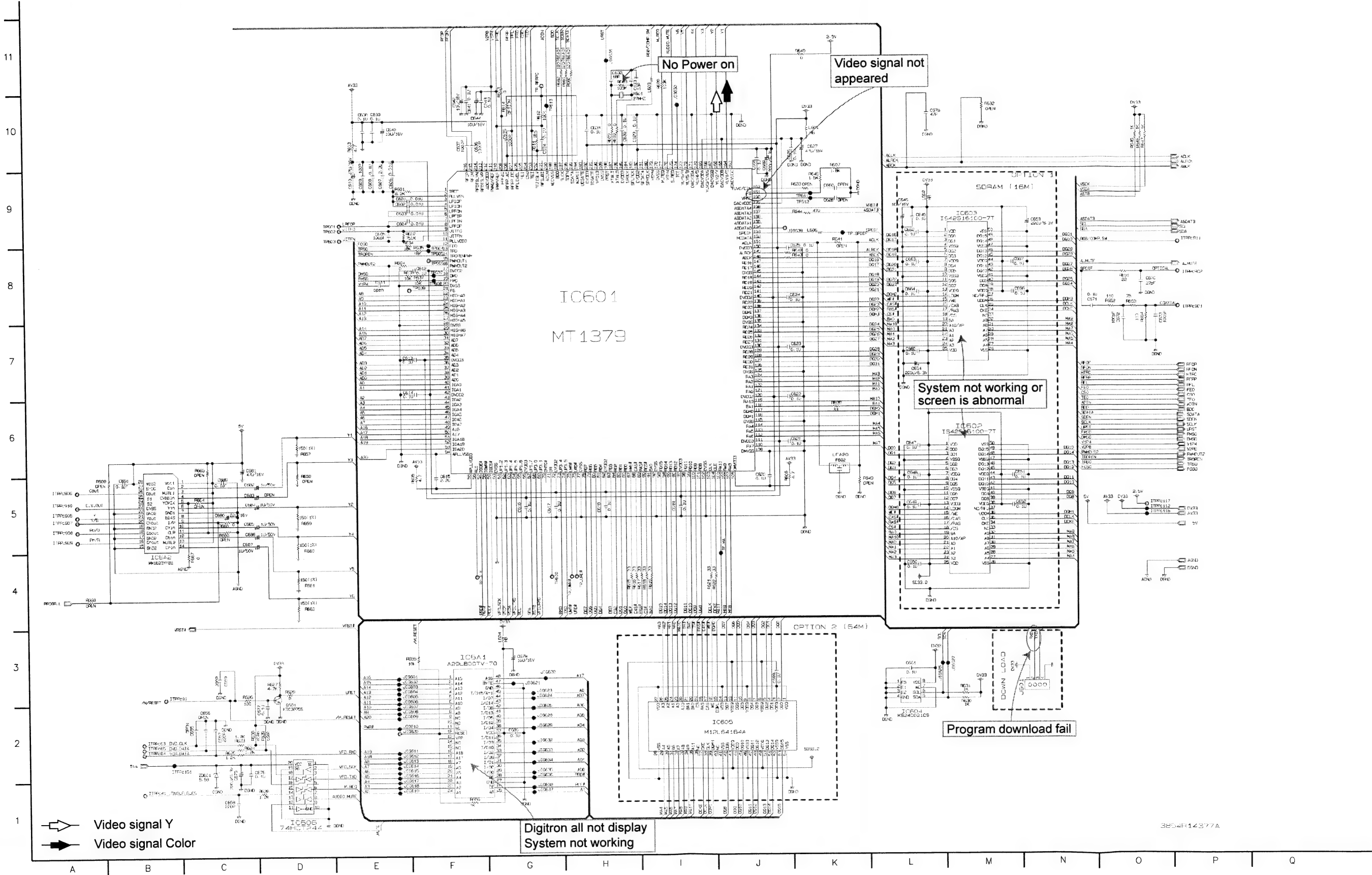
MEMO

4. VIDEO & AUDIO Block Diagram



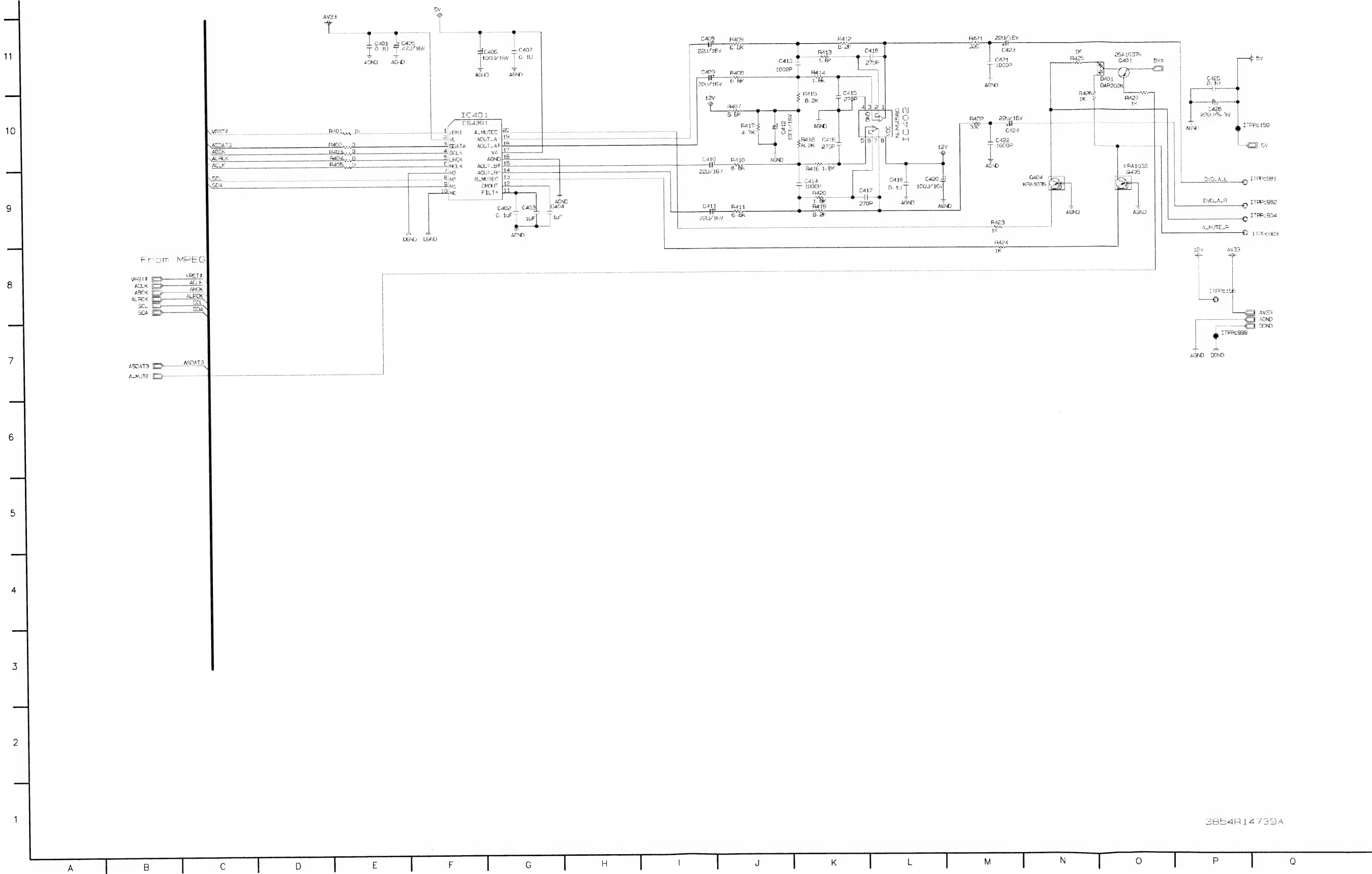
COMBI SCART
VC8806P1K'S

CIRCUIT DIAGRAMS
1. SYSTEM CIRCUIT DIAGRAM



[illegible]

3. AV/JACK CIRCUIT DIAGRAM



• CIRCUIT VOLTAGE CHART

	IC201(MT1338E)		IC202(MOTOR)		IC501(MT1378)		IC502(SDRAM)		IC505(EEPROM)		IC510(BUFFER)		IC5A1(FLASH)		IC401(CS4381)		IC402(AMP)		IC5C1(MM1623XPE)	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
1	1.03	2.99	0	0	1.22	1.22	3.27	3.28	0	0	0	0	0.08	0.16	3.28	3.29	5.52	5.49	5.09	5.08
2	5.11	5.08	0	0	0	0	1.18	1.26	0	0	2.59	2.55	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
3	0	0	8.04	8.01	0.96	0.9	1.1	1.52	0	0	0	0	0.08	0.16	3.28	3.29	5.52	5.49	5.09	5.08
4	0	0	0.12	0.06	2	2.06	0	0	0	0	2.59	2.56	1.82	0.45	3.28	3.28	5.52	5.48	2.43	2.42
5	5.11	5.07	0	0.06	0	1.51	0.66	1.07	3.28	3.29	0	0	2.84	0	0	1.65	5.51	5.47	5.09	5.08
6	0	1.95	3.64	3.69	1.48	1.47	0.85	1.12	3.28	3.29	3.24	3.23	2.83	3.12	1.63	1.64	0	0	1.45	0
7	0	0	3.62	3.61	0	1.56	3.27	3.28	0	0	0	0	0.69	0.26	1.64	1.65	5.51	5.48	0	0
8	0	0	3.64	3.53	3.2	1.52	0.51	0.97	3.28	3.29	0.14	0.08	1.72	0.25	1.59	1.61	5.51	5.48	1.45	1.69
9	5.11	0	3.6	3.76	0.12	0.06	3.06	0			0	0	1.92	0.9	0	0	5.52	5.47	0	0
10	5.11	5.08	3.62	2.43	0.12	0.06	0	0			0	0	1.7	1.45	3.28	0	12.03	12.03	2.47	2.46
11	5.11	5.08	3.63	4.85	3.25	3.25	0.06	0.98			0.15	0.09	0	0	3.28	3.29			0	0
12	0	0	3.62	3.72	1.41	1.49	3.18	0.87			0	0	0	0	0	0			1.14	1.76
13	5.11	0	3.64	3.57	1.41	1.41	3.27	3.28			0.15	0.08	3.27	3.29	5.01	5.01			0	0
14	5.11	5.08	8.04	8.01	0	0	2.94	2.56			5.19	5.19	3.56	3.55	2.31	2.31			2.42	2.42
15	2.84	2.81	1.45	1.48	1.42	1.42	0.47	0.42			0.14	0.09	3.29	3.29	4.96	0			5.09	5.08
16	1.45	1.43	0.27	1.39	3.3	0	2.93	3.01			5.25	5.24	0	0	1.42	2.41			2.43	2.42
17	2.08	2.07	0.29	1.32	2.53	2.53	3.21	3.22			0.15	0.08	0.23	0.06	2.4	2.39			0	0
18	1.37	1.42	1.45	1.43	1.42	2.27	2.87	2.95			5.23	5.23	0	0	0	0			2.49	2.47
19	0.69	2.3	1.45	1.43	1.42	1.39	0.15	1.32			0	0	0	0	5.11	5.09			0	0
20	2.4	0	1.45	0.82	0	0	0	0.05			5.25	5.25	0	0.87	2.41	2.41			2.48	2.47
21	2.35	0	1.45	1.43	2.61	2.58	3.09	1.32					1.98	2.64	2.43	2.43			0	0
22	5.11	5.08	1.45	1.43	0.75	1.46	3.09	1.32					2.28	2.18	0	0			1.18	2.3
23	0	0	1.47	1.37	2.83	1	3.09	1.32					2.13	1.96					1.76	2.17
24	2.59	3.2	1.45	1.43	1.9	0.89	3.09	1.33					1.67	2.01					0	0
25	0.19	1.88	1.45	1.43	1.72	0.39	3.27	3.29					1.99	1.72					1.76	2.24
26	1.58	0	0.95	0.91	0.68	0.31	0	0					1.93	2.19					0	0
27	2.56	3.13	0	0	2.84	3.16	0.15	1.36					2.05	1.94					0	0
28	2	2.01	1.45	1.43	0	0	1.84	2.36					0	0					0	0
29	2	2.06	5.15	5.11	2.85	0.66	1	2.32					0	0					0.06	0.05
30	2.96	1.52	1.45	1.43	1.83	0.49	0.54	1.75					0	0					5.09	0
31	0	0	1.45	1.43	0.91	1.39	0.06	0.06					1.49	2.03						
32	0.06	2.07	1.45	1.43	1.43	1.2	0.05	0.06					0.16	1.07						
33	0.07	2.07	1.46	1.45	1.51	1.57	0	0					1.96	1.25						
34	0	0	5.08	5.06	1.51	1.43	0.73	1.26					0.16	1.1						
35	0	0	5.15	5.11	3.3	3.29	1.48	1.55					0.99	2.2						
36	0	0	0	0	0.81	1.26	2.91	2.53					1.17	1.07						
37	5.13	0			1.45	1.02	0.07	0					0.79	1.82						
38	0	0			1.82	1.6	3.27	3.28					0.15	1.07						
39	0	0			2	1.5	1.06	1.05					3.29	3.3						
40	0	0			2	2.06	0.47	0.98					1.93	3.09						
41	0	0			2.17	1.95	0	0					0.16	1.07						
42	5.12	5.09			2.53	2.52	0	0.6					1.5	2.2						
43	5.12	5.09			1.96	1.9	1.12	1.24					0.16	1.07						
44	5.12	5.09			1.79	1.9	3.27	3.28					1.21	2.64						
45	5.12	5.09			0.8	1.72	1.21	0.99					0.16	1.08						
46	5.12	5.09			0.8	1.96	1.31	1.34					1.64	1.48						
47	0	0			0.8	1.84	0	0					2.05	2.06						
48	5.12	5.09			3.3	2.63	1.43	1.44					0	0						
49	5.12	0			0	0.13	0.88	1.01					0	0						
50	5.08	5.06			0	0.07	0	0					0.07	0.13						
51	5.09	5.07			0	0														
52	5.1	0			0	0														
53	0	0			0	0														
54	5.13	0			0	0														
55	0.09	0.2			3.25	3.27														
56	1.61	0			1.21	1.18														
57	0	0			0	0														
58	0	0			3.29	3.29														
59	0	0			0	0														
60	0	0			0	0														
61	3.28	0			2.59	2.57														
62	0	0			2.58	2.58														
63	0	0			0	0														
64	0	0			2.59	2.56														
65	0	0			3.29	3.29														
66	0.26	0			3.3	3.29														
67	5.12	5.08			3.29	3.29														
68	0	0			2.57	2.56														
69	5.12	0			5.19	5.18														
70	3.21	2.03			2.59	2.57														
71	3.46	2.2			0.12	0.08														
72	2.81	0			2.53	2.52														
73	0	0			2.59	2.57														
74	0.21	0.09			3.29	3.29														
75	0.22	0			2.61	2.61														
76	0	0.1			3.27	3.24														
77	0.21	0.09			0	0														
78	0.23	0.09			0.94	1.04														
79	0.21	0.08			0.78	1.06														
80	0.23	0.08			0.89	1.15														

[illegible]

SECTION 4 MECHANISM (D-37)

CONTENTS

POSITION DRAWING OF DECK MECHANISM PARTS

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GUIDE FOR TROUBLESHOOTING

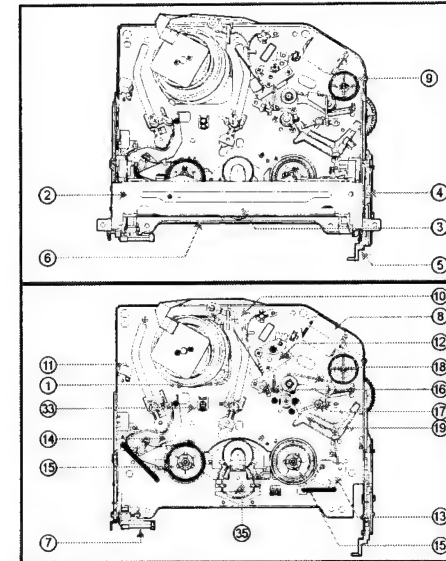
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EXPLODED VIEWS

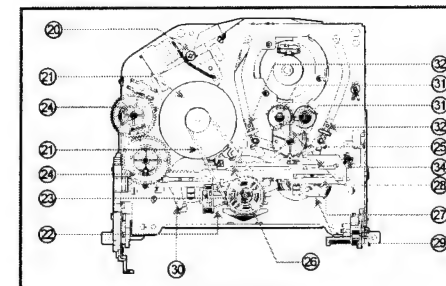
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POSITION DRAWING OF DECK MECHANISM PARTS

• Top View



• Bottom View



NOTE : Assembly order is a reverse of disassembly order.

- (1) For assembly, check the assembly mode is accurate.
- (2) Parts firstly disassembled indicate parts firstly disassembled in disassembly of related parts.

Order Of Dis- assembly Parts firstly Disassembled	Part	Fixing Type	Ref. Draw- ings	Posi- tion
1	Drum Assembly	3 screws	A-1	T
2	Plate Top	2 hooks	A-2	T
2	3 Holder Assembly CST	6 chasses	A-2	T
2,3	4 Gear Assembly Rack F/L	1 hook	A-2	T
2,3,4	5 Opener Door	Chassis Hole	A-2	T
2,3,4,5	6 Arm Assembly F/L	Chassis Hole	A-2	T
7	Lever Assembly S/W	Chassis Hole, 1 hook	A-2	T
8	Motor Assembly L/D	1 screw	A-3	T
9	Gear Wheel	2 hooks	A-3	T
10	Arm Assembly Cleaner	Chassis Embossing	A-3	T
11	Head F/E	Chassis Embossing	A-3	T
12	Base Assembly A/C Head	1 screw	A-3	T
2,3	13 Brake Assembly T	1 hook	A-4	T
2,3	14 Arm Assembly Tension	1 hook	A-4	T
2,3,13,14	15 Reel S / Reel T	Shaft	A-4	T
16	Base Assembly P4	Chassis Embossing	A-5	T
17	Opener Lid	Chassis Embossing	A-5	T
17	18 Arm Assembly Pinch	Shaft	A-5	T
17	19 Arm T/up	1 hook	A-5	T
20	Supporter, capstan	Chassis Hole	A-6	B
17,18	21 Belt Capstan/Motor Capstan	3 screws	A-6	B
22	Lever F/R	Locking Tab	A-6	B
21,22	23 Clutch Assembly D37	Washer	A-6	B
24	Gear Drive/Gear Cam	Washer/Hook	A-7	B
25	Gear Sector	Hook	A-7	B
21	26 Brake Assembly Capstan	Chassis Hole	A-7	B
21,22,23, 24,25,26	27 Plate Slider	Chassis Guide	A-7	B
21,22,23, 24,25,26,27	28 Lever Tension	1 Hook	A-7	B
21,22,23, 24,25,26,27	29 Lever Spring	1 Hook	A-7	B
21,22,23, 24,25,26,27	30 Lever Brake	1 Hook	A-7	B
25	31 Gear Assembly P2/ Gear Assembly P3	Bass	A-8	B
2,3,14, 25,31	32 Base Assembly P2 /Base Assembly P3	6 Chasses	A-8	B
25,31	33 Base Loading	3 Hooks	A-8	B
2,3,14	34 Base Tension	Chassis Embossing	A-9	T
35	Arm Assembly Idler Jog	Locking Tab	A-9	T

T:Top, B:Bottom

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

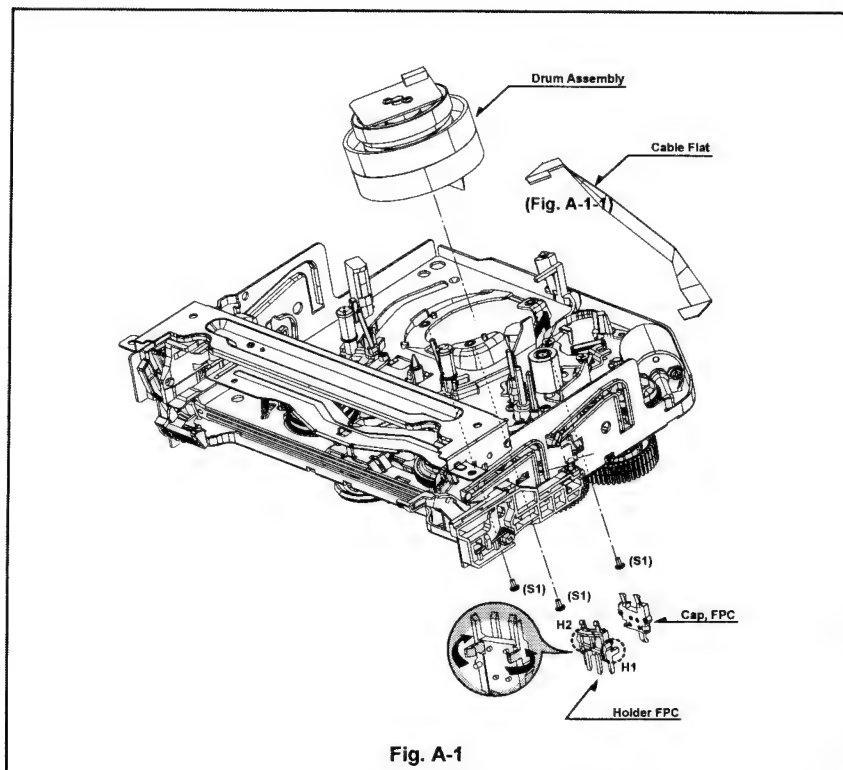
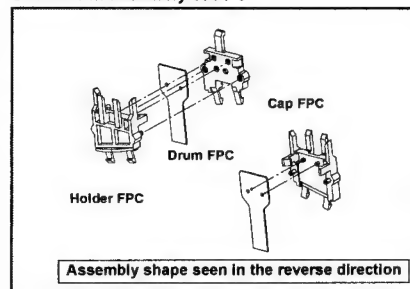


Fig. A-1

1. Disassembly of Drum Assembly (Figure A-1)

- 1) Separate cable flat from the Drum FPC and the Capstan Motor.
- 2) Release 3 screws (S1) on the bottom side of the chassis, and separate the drum assembly.
- 3) Release the hooks (H1, H2) and separate both the holder FPC and the Cap FPC (disassemble if necessary).

Cautions in assembly of FPC



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

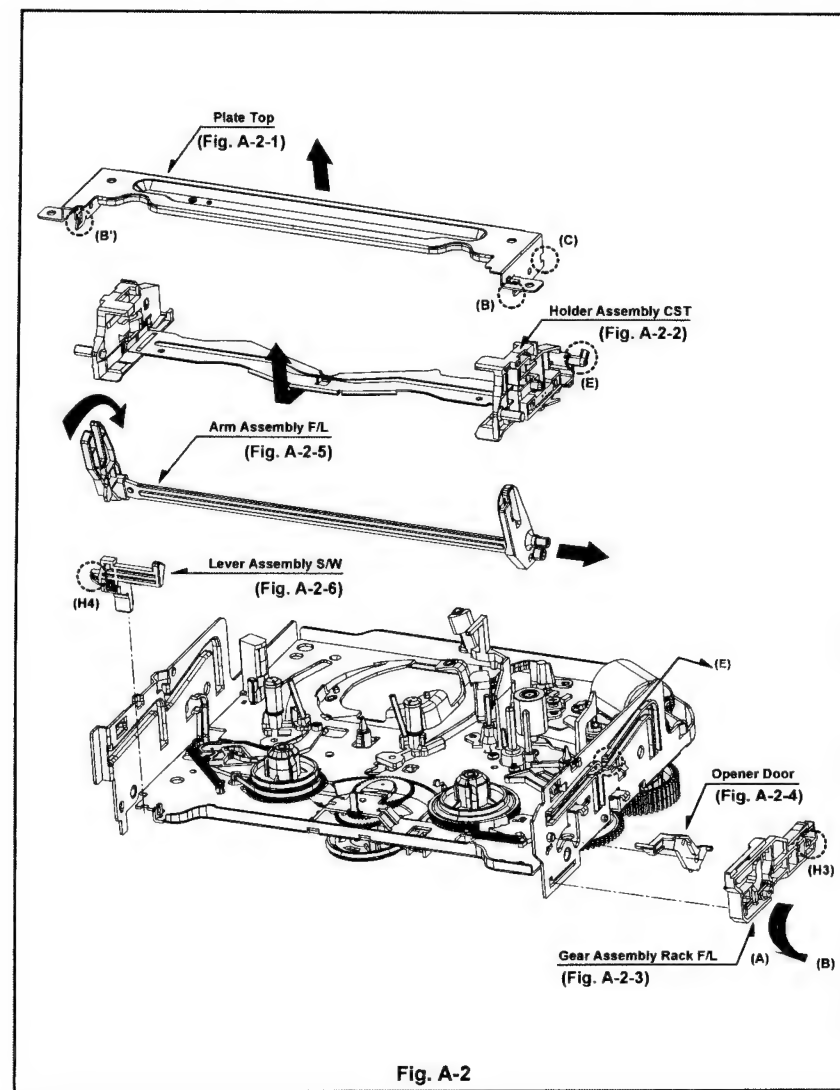


Fig. A-2

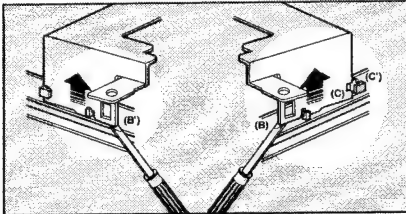
DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

2. Disassembly of Plate Top (Fig. A-2-1)

- 1) Separate the right part while leaning back the (B) part of the plate top toward the arrow direction.
- 2) Separate the left part while leaning back the (B') part of the plate top toward the arrow direction.
(Tool used: Tool such as (-) driver, auger, etc with pointed or flat end)

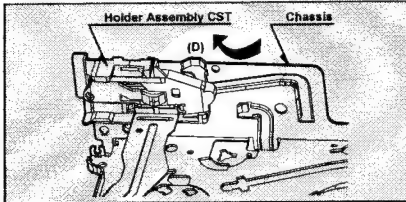
CAUTIONS

Assemble while pressing the (C), (C') part after corresponding them as in drawing.



3. Holder Assembly CST (Fig. A-2-2)

- 1) Firstly separate the left part from the groove on the (D) part of chassis while moving the holder assembly CST toward the arrow direction.



- 2) Separate the right part from each groove of chassis

CAUTIONS

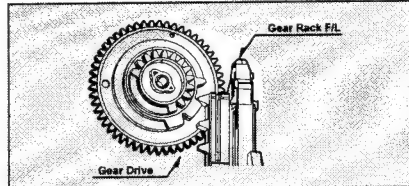
Assemble by inserting the left part after firstly inserting the (E) part of the holder assembly CST into the groove on the (E') part of chassis.

4. Disassembly of Gear Assembly Rack F/L (Fig. A-2-3)

- 1) Separate the hook (H3) while leaning ahead the hook (3) after moving the gear assembly rack F/L toward the arrow (A) direction.
- 2) Separate the gear assembly rack F/L toward the arrow (B) direction.

CAUTIONS

For the assembly, correspond the gear part of gear assembly rack F/L to the gear drive.



5. Opener Door (Fig. A-2-4)

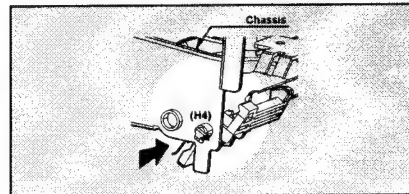
- 1) Separate the opener door ahead from the guide hole of chassis while turning it clockwise.

6. Arm Assembly F/L (Fig. A-2-5)

- 1) Firstly separate the left part of the arm assembly F/L from the groove of chassis while pushing the arm assembly F/L toward the arrow direction.
- 2) Separate the right part from the groove of chassis.

7. Lever Assembly S/W (Fig. A-2-6)

- 1) Separate the lever assembly S/W while pushing it toward the arrow direction after removing the hook (4) on the left side of chassis.



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

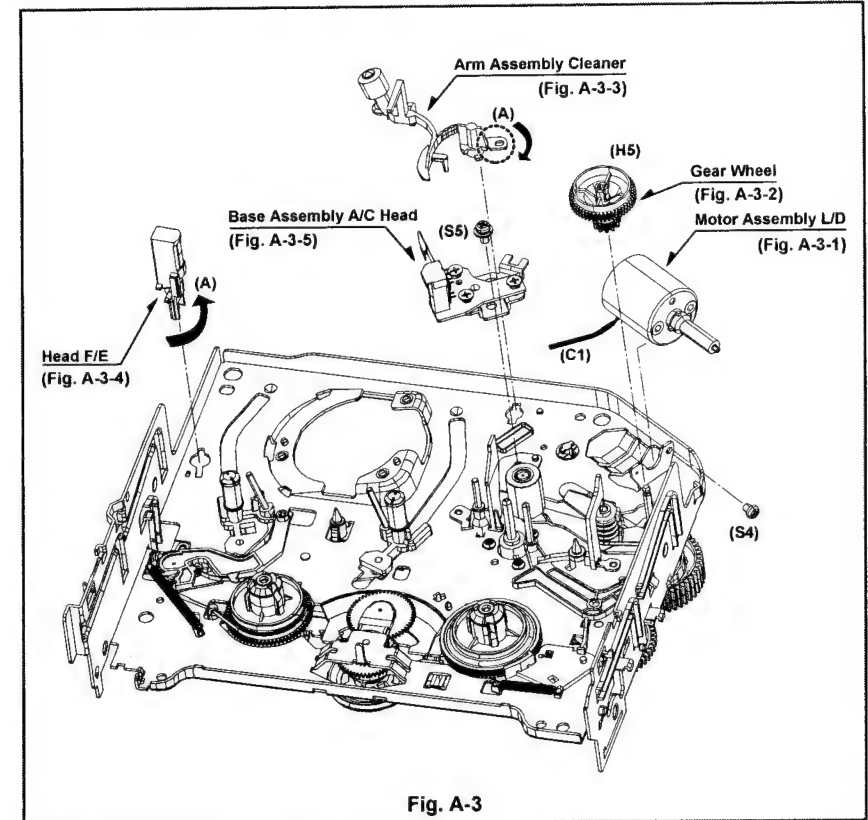


Fig. A-3

8. Motor Assembly L/D (Fig. A-3-1)

- 1) Take the connector (C1) connected to the Capstan motor PCB out.
- 2) Remove a screw (S4) of the chassis (S4) and step backward, and disassemble it while holding it up.

9. Gear Wheel (Fig. A-3-2)

- 1) Release the hook (H5) of the gear wheel and disassemble it upward.

10. Arm Assembly Cleaner (Fig. A-3-3)

- 1) Separate the (A) part of Fig. A-3-1 from the embossing of chassis, and hold it up while turning it anti-clockwise.

11. Head F/E (Fig. A-3-4)

- 1) Separate the (A) part of the head F/E from the embossing of chassis, and hold it up while turning it anti-clockwise.

12. Base Assembly A/C Head (Fig. A-3-5)

- 1) Release a screw (S5) and disassemble while holding it up.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

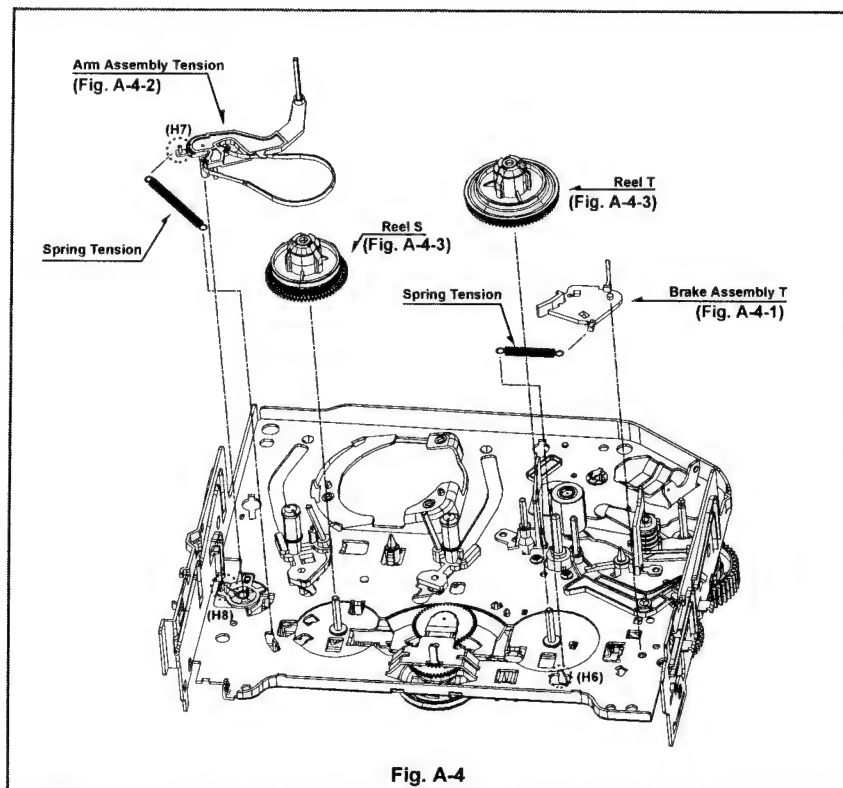


Fig. A-4

13. Brake Assembly T (Fig. A-4-1)

- 1) Release the spring tension from the lever spring hook (H6).
- 2) Disassemble the brake assembly T while holding it upward.

14. Arm Assembly Tension (Fig. A-4-2)

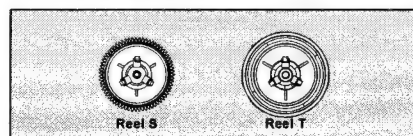
- 1) Release the spring tension the hook (H7) from the arm assembly tension.
- 2) After releasing the hook (H8) of the base tension, separate it while holding it up.

CAUTIONS

Spring used for both brake assembly T and arm assembly tension is used (2EA used).

15. Reel S/Reel T (Fig. A-4-3)

- 1) Disassemble the reel S/ reel T while holding it up (comparison between Reel S and Reel T)



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

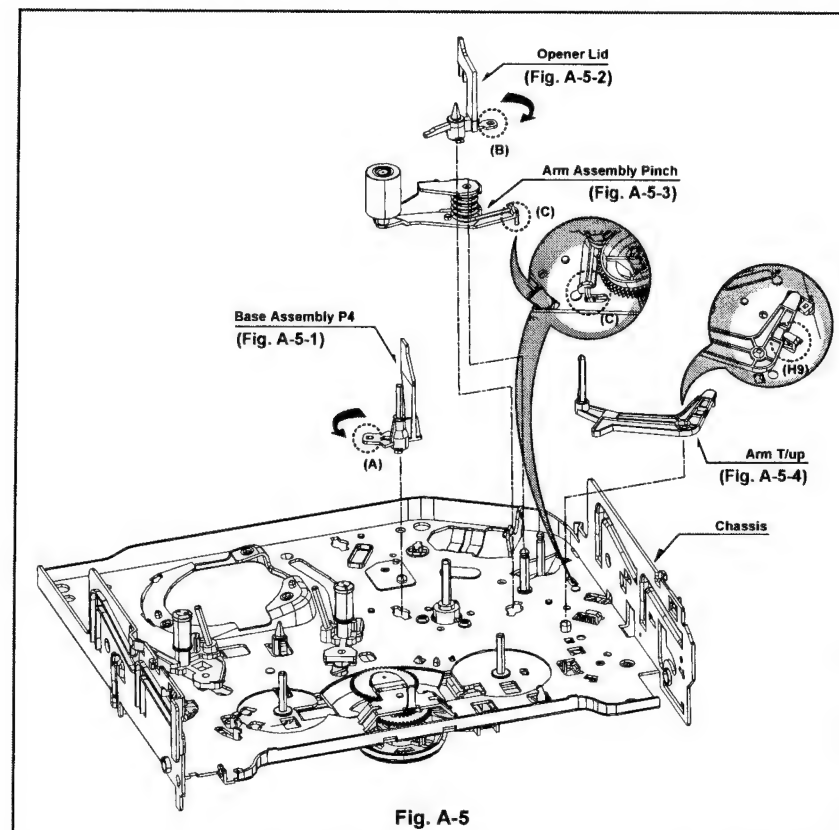


Fig. A-5

16. Base Assembly P4 (Fig. A-5-1)

- 1) Release the (A) part of the base assembly P4 from the embossing of chassis.
- 2) Hold the base assembly P4 up while turning it anti-clockwise.

17. Opener Lid (Fig. A-5-2)

- 1) Release the (B) part of the opener lid from the embossing of chassis.
- 2) Disassemble the opener lid upward while turning it anti-clockwise.

18. Arm Assembly Pinch (Fig. A-5-3))

- 1) Hold the arm assembly pinch up.

19. Arm T/up (Fig. A-5-4)

- 1) Turn the arm T/up to release the anchor jaw (H9) part of chassis and then hold it upward.

CAUTIONS

For the assembly, check the (C) part of the arm assembly pinch is assembled as in drawing.

- REVERSE THE MECHANISM.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

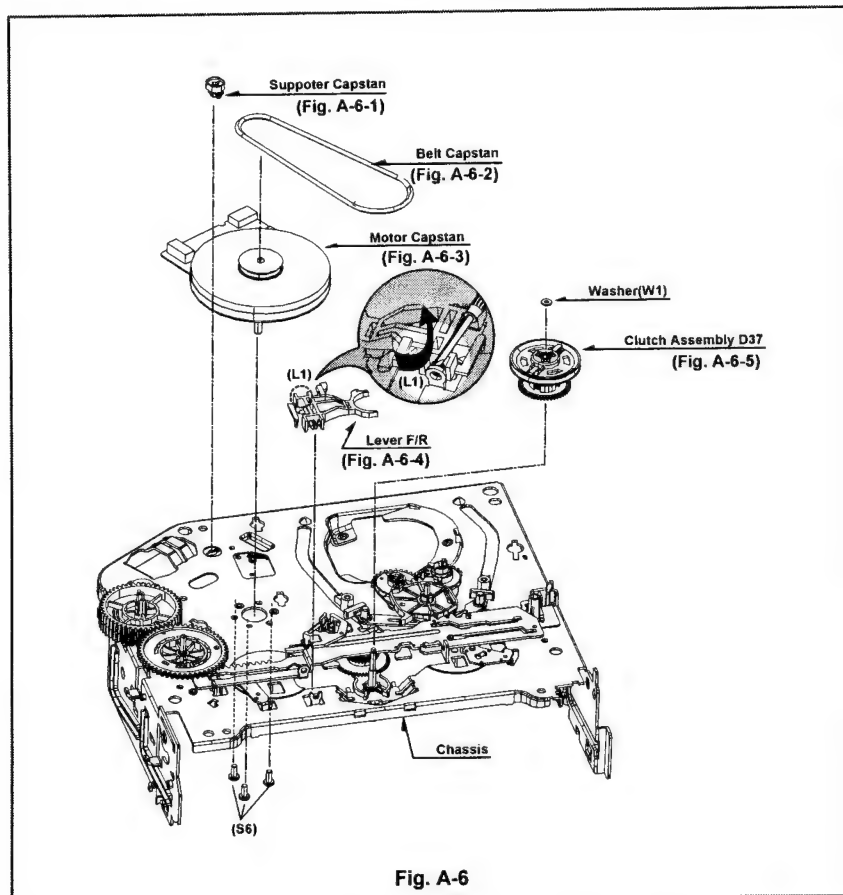


Fig. A-6

20. Supporter, Capstan (Fig. A-6-1)

- 1) Turn the supporter and Capstan by 90 deg. clockwise with a driver for disassembly.

21. Belt Capstan (Fig. A-6-2) / Motor Capstan (Fig. A-6-3)

- 1) Separate the belt Capstan.
- 2) Undo 3 screws (S6) on the bottom side of chassis and disassemble it upward.

22. Lever F/R (Fig. A-6-4)

- 1) Release the locking tab (L1) and then disassemble it upward.

23. Clutch Assembly D37 (Fig. A-6-5)

- 1) Remove the washer (W1) and then disassemble it upward.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

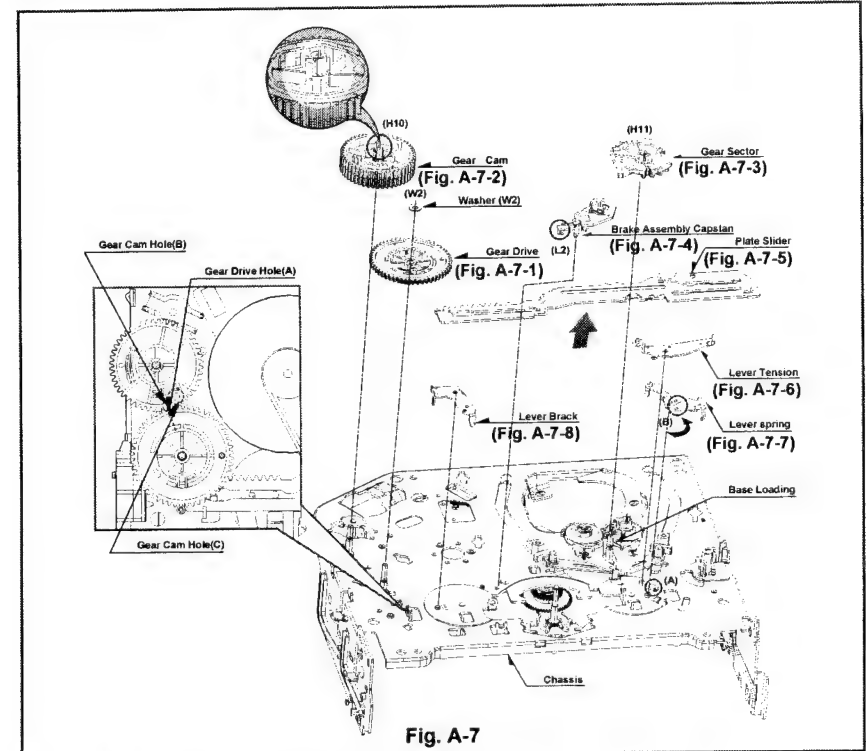


Fig. A-7

24. Gear Drive (Fig. A-7-1) / Gear Cam (Fig. A-7-2)

- 1) Remove the washer (W2) and then disassemble the gear drive.
- 2) Release the hook (H10) of the gear cam and then disassemble it upward.

CAUTIONS

For the assembly, adjust both the gear driver hole (A) and the gear cam hole (B) straightly and then correspond the gear cam hole (C) to the chassis hole.

25. Gear Sector (Fig. A-7-3)

- 1) Release the hook (H11) of the gear sector and then hold the gear sector upward.

26. Brake Assembly Capstan (Fig. A-7-4)

- 1) Release the locking tab (L2) on the bottom side of the plate slider and then disassemble it upward.

27. Plate Slider (Fig. A-7-5)

- 1) Disassemble the plate slider while holding it up.

28. Lever Tension (Fig. A-7-6)

- 1) Release the lever tension from the guide (A) of chassis while turning it anti-clockwise.
- 2) Disassemble the lever tension while holding it up.

29. Lever Spring (Fig. A-7-7)

- 1) Release the (B) part of the lever spring from the guide (A) of chassis while turning it anti-clockwise.
- 2) Disassemble the lever tension while holding it up.

30. Lever Brake (Fig. A-7-8)

- 1) Disassemble the lever brake while holding it up.

DECK MECHANISM DISASSEMBLY

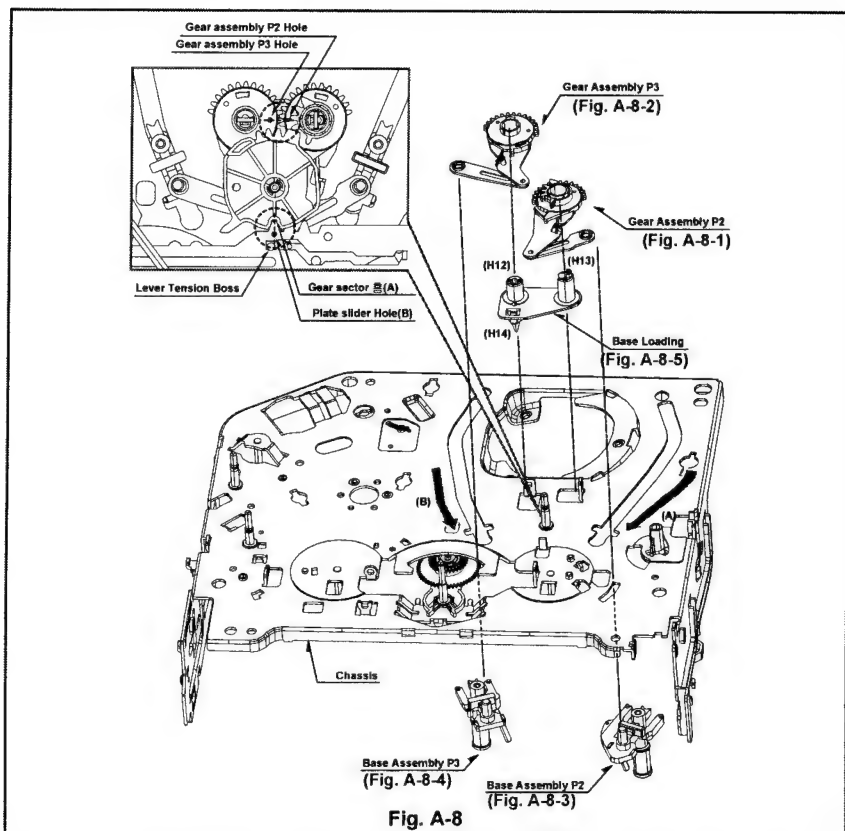


Fig. A-8

31. Gear Assembly P2 (Fig. A-8-1)/ Gear Assembly P3 (Fig. A-8-2)

- 1) Hold the gear assembly P2 upward.
- 2) Hold the gear assembly P3 upward.

CAUTIONS

For the assembly, check the holes of both the gear assembly P2 and the P3 are adjusted straightly, and then correspond the gear section groove (A) to the plate slider hole (B).

32. Base Assembly P2 (Fig. A-8-3)/ Base Assembly P3 (Fig. A-8-4)

- 1) Disassemble the base assembly P2 downward while moving it toward the arrow (A) direction along with the guide hole of chassis.
- 2) Disassemble the base assembly P2 downward while moving it toward the arrow (B) direction along with the guide hole of chassis.

33. Base Loading (Fig. A-8-5)

- 1) Release 3 hooks (H12, 13, 14) of the base loading, and then disassemble them upward.
- Reverse the mechanism.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

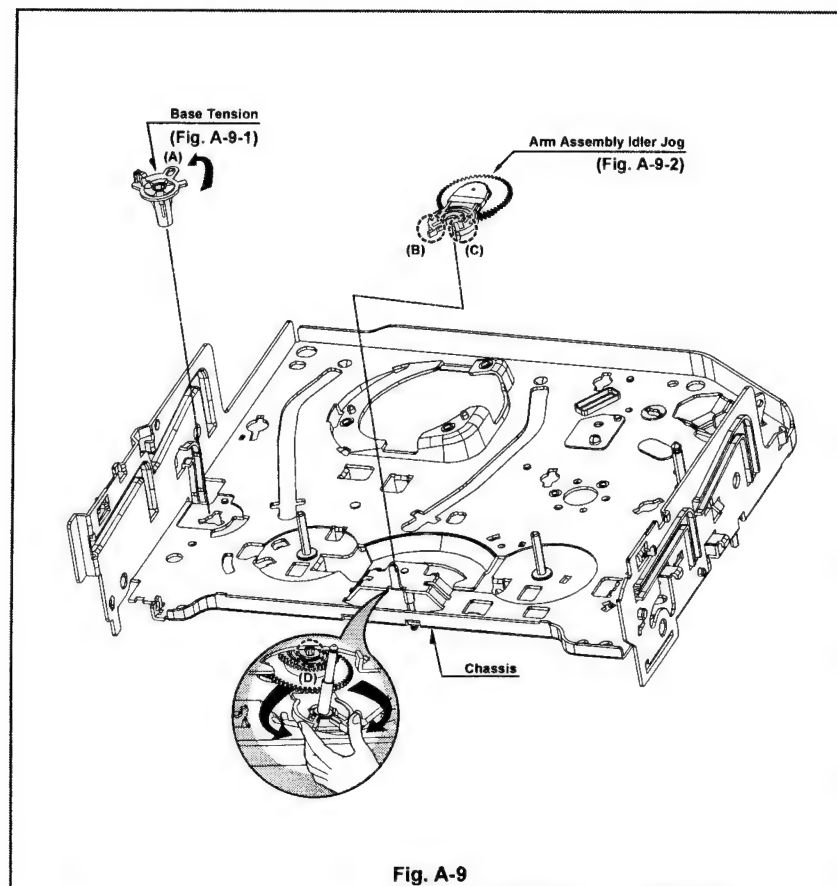


Fig. A-9

34. Base Tension (Fig. A-9-1)

- 1) Release the (A) part of the base tension from the embossing of chassis.
- 2) Hold the base tension upward while turning it anti-clockwise.

35. Arm assembly Idler Jog (Fig. A-9-2)

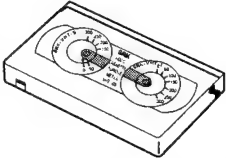
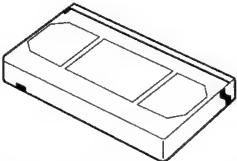




- 1) Push both (B), (C) parts in Fig. A-9-2 toward the arrow direction.
- 2) Disassemble the arm assembly idler upward.

CAUTIONS

Take care to ensure that the (D) part in the drawing is not hung to chassis in disassembly.

DECK MECHANISM ADJUSTMENT

• Fixtures and Tools for Service

1. Cassette Torque Meter SRK-VHT-303(Not SVC part) Part No:D00-D006 	2. Alignment tape Part No NTSC:DTN-0001 PAL:DTN-0002 	3. Torque gauge 600g.Cm ATG Part No:D00-D002 
4. Torque gauge adaptor Part No:D09-R001 	5. Post height adjusting driver Part No:DTL-0005 	6. + Type driver (ø5) 

DECK MECHANISM ADJUSTMENT

1. Mechanism Assembly Mode Check

Purpose of adjustment : To make tools normally operate by positioning tools accurately.		
Fixtures and tools used	VCR (VCP) status	Checking Position
• Blank Tape (empty tape)	• Eject Mode (with cassette withdrawn)	• Mechanism and Mode Switch
1) Turn the VCR on and take the tape out by pressing the eject button. 2) Separate both top cover and plate top, and check both the hole (A) of gear cam and the hole (A') of chassis correspond (Fig. C-2). 3) If it is done as in the paragraph 2): Turn the gear cam as in No.2) after mantling the motor assembly L/D. 4) Undo the screw fixing the deck and the main frame, and separate the deck assembly. Check both the hole (A) of gear cam and the hole (A') of chassis correspond (Fig. C-1). 5) Check the mode S/W on the main P.C. board locates at a proper position as in (B) of the Fig. (C-1). 6) Connect the deck to the main P.C. board and perform all types of test.		

CHECK DIAGRAM

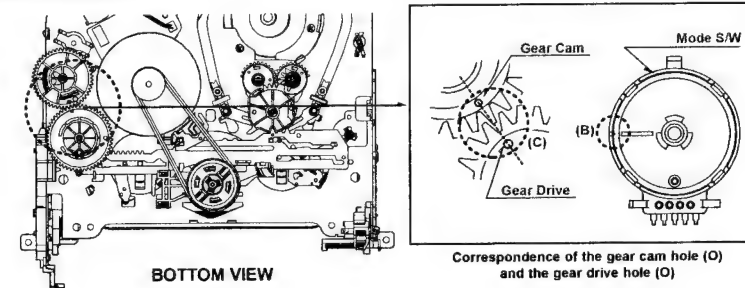


Fig. C-1

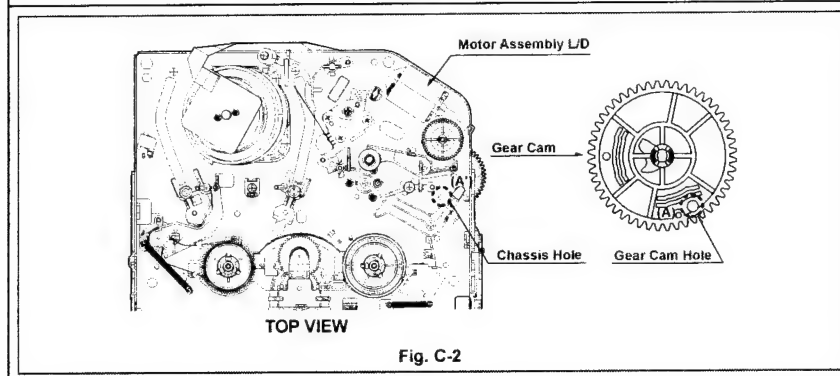


Fig. C-2

DECK MECHANISM ADJUSTMENT

2. Previous Preparation for Deck Adjustment

(Preparation to load the VCR (VCP) with cassette tape not inserted)

- 1) Take the power cord from the consent.
- 2) Separate the top cover and the plate assembly top.
- 3) Insert the power cord into again.
- 4) Turn the VCR (VCP) on and load the cassette while pushing the lever stopper of the holder assembly CST backward. In this case, clog both holes on the housing rail part of chassis to prevent detection of the end sensor.

If doing so, proceeding to the stop mode is done. In this status, input signals of all modes can be received. However, operation of the Rewind and the Review is impossible since the take-up reel remains at stop status and so cannot detect the reel pulse (however, possible for several seconds).

3. Torque Measuring

Purpose of Measuring : To measure and check the reel torque on the take-up part and the supply part that performs basic operation of the VCR (VCP) for smoothly forwarding the tape.
Measure and check followings when the tape is not smoothly wound or the tape velocity is abnormally proceeded:

Fixtures and tools used		VCR (VCP) status	Measuring method	
<ul style="list-style-type: none">• Torque Gauge (600 g.cm ATG)• Torque Gauge Adaptor• Cassette Torque Meter SRK-VHT-303		<ul style="list-style-type: none">• Play (FF) or Review (REW) Mode	<ul style="list-style-type: none">• Try to operate the VCR (VCP) per mode with the tape not inserted (See '2. Prior Preparation for Deck Adjustment').• Measure after adhering and fixing the torque gauge adaptor to the torque gauge (Fig. C-3-1)• Read scale of the supply or take-up part of the cassette torque meter (Fig. C-3-2).	
Item	Mode	Instruments	Reel Measured	Measuring Value
Fast forward Torque	Fast Forward	Torque Gauge	Take-Up Reel	More than 400g*cm
Rewind Torque	Rewind	Torque Gauge	Supply Reel	More than 400g*cm
Play Take-Up Torque	Play	VHT-303	Take-Up Reel	40~100g*cm
Review Torque	Review	VHT-303	Supply Reel	120~210g*cm

NOTE

Adhere the torque gauge adaptor to the torque gauge for measuring the value.

• Torque Gauge (600g.cm ATG)

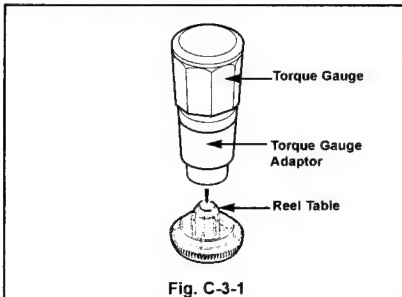


Fig. C-3-1

• Cassette Torque Meter (SRK-VHT-303)

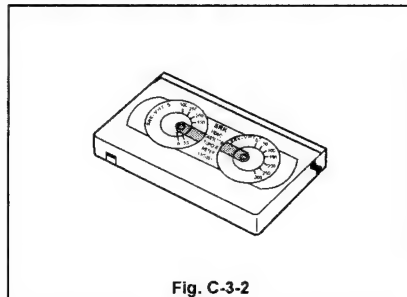


Fig. C-3-2

DECK MECHANISM ADJUSTMENT

4. Guide Roller Height Adjustment

Purpose of adjustment : To ensure that the bottom surface of the tape can travel along with the tape lead line of the lower drum by constantly and adjusting and maintaining the height of the tape.

4-1. Prior Adjustment

Fixtures and tools used	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> • Post Height Adjusting Driver 	<ul style="list-style-type: none"> • Play or Review Mode 	<ul style="list-style-type: none"> • The guide roller height adjusting screw on the supply guide roller and the take-up guide roller
Adjustment Procedure 1) Travel the tape and check the bottom surface of the tape travels along with the guide line of the lower drum. 2) If the tape travels toward the lower part of guide line on the lower drum, turn the guide roller height adjusting screw to the left. 3) If it travels to the upper part, turn it to the right. 4) Adjust the height of the guide roller to ensure that the tape is guided on the guide line of the lower drum at the inlet/outlet of the drum. (Fig. C-4-1)		ADJUSTMENT DIAGRAM

4-2. Fine Adjustment

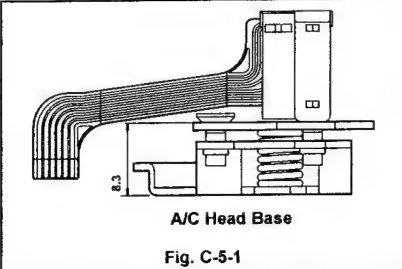
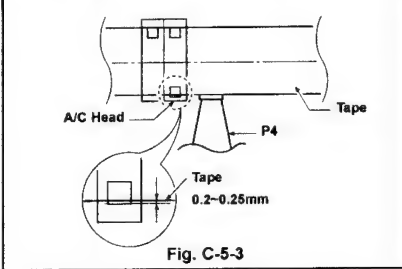
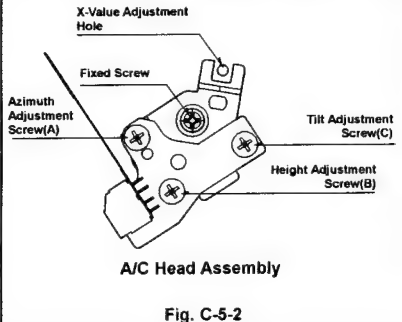
Fixtures and tools used	Measuring tools and connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> • Oscilloscope • Standard test tape • Post height adjusting driver 	<ul style="list-style-type: none"> • CH-1: PB RF Envelope • CH-2: NTSC : SW 30Hz PAL : SW 25Hz • Head switching output point • RF Envelope output point 	<ul style="list-style-type: none"> • Play the standard test tape. 	<ul style="list-style-type: none"> • Guide roller height adjusting screw
1) Play the standard test tape after connecting the probe of oscilloscope to the RF envelope output point and the head switching output point. 2) Tracking control (playback) : Locate it at the center (Set the RF output to the maximum value via the tracking control when such adjustment is completed after the drum assembly is replaced.) 3) Height adjusting screw: Flatten the RF waveform. (Fig. C-4-2) 4) Move the tracking control (playback) to the right/left. (Fig. C-4-3) 5) Check the start and the end of the RF output reduction width are constant.		Waveform 	
CAUTIONS There must exist no crumpling and folding of the tape due to excess adjustment or insufficient adjustment.		Connection Diagram 	

DECK MECHANISM ADJUSTMENT

5. Audio/Control (A/C) Head Adjustment

Purpose of adjustment : To ensure that audio and control signals can be recorded and played according to the contract tract by constantly maintaining distance between tape and head, and tape tension between the P3 post and the P4 post.

5-1. Prior Adjustment (performed only when no audio output appears in play of the standard test tape)

Fixtures and tools used	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Blank Tape (Empty Tape) Driver (+) Type $\phi 5$ 	<ul style="list-style-type: none"> Play the blank tape (empty tape). 	<ul style="list-style-type: none"> Tilt adj. using screw (C) Height adj. using screw (B) Azimuth adj. using screw (A)
Adjustment Procedure/Adjustment Diagrams 1) Basically use the A/C head assembly adjusted as in SPEC. 2) Check there is crumpling and folding of the tape around the A/C head. If it is, Turn and adjust the tilt adjusting screw to ensure that the tape corresponds to the bottom guide of the P4, and recheck the tape path after proceeding play for 4-5 seconds. 3) Where the tape bottom is not equal to Fig. C-5-3, Adjust the height by using the height adjusting screw (B) and then readjust it by using the tilt adjusting screw (C).		
CAUTIONS Always check the height of the A/C head since most ideal height of A/C head can be obtained when the bottom part of the tape is away 0.2 ~ 0.25mm from the bottom part of the A/C head.		
		
		
		

DECK MECHANISM ADJUSTMENT

5-2. Tape Path Check between Pinch Roller and Take up Guide (Check in the Rev Mode)

- 1) Check the tape pass status between the pinch roller and the take-up guide. (Check there is crumpling of the tape pass and folding of the take-up guide.)
 - (1) When holding of the take-up guide bottom occurs Turn the tilt adjusting screw (C) clockwise and travel it stably to ensure there is no crumpling or folding of the tape.
 - (2) When holding of the take-up guide top occurs Turn the tilt adjusting screw (C) anti-clockwise and

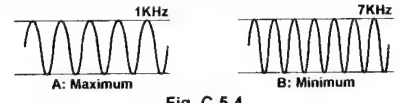
travel it stably to ensure there is no crumpling or folding of the tape.

- 2) Check there is folding of the tape at the bottom or top of the take-up guide in cutting-off the REV mode

CAUTIONS

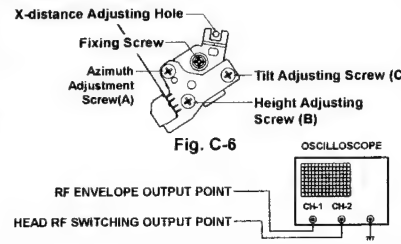
If the RF waveform is changed after adjusting the A/C head, perform fine adjustment to ensure the RF waveform is flattened.

5-3. Fine Adjustment (Azimuth Adjustment)

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Oscilloscope Standard test tape (only for SP) Driver (+) Type $\phi 4$ 	<ul style="list-style-type: none"> Audio Output Jack 	<ul style="list-style-type: none"> Play the standard test tape, 1KHz, 7KHz. 	<ul style="list-style-type: none"> Azimuth Adjusting Screw (A) Height Adjusting Screw (B)
Adjustment Procedure 1) Connect the probe of Oscilloscope to the audio output jack. 2) Ensure that Audio 1KHz, 7KHz output is flattened at the maximization point by adjusting the Azimuth adjusting screw (A).			
			

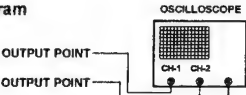
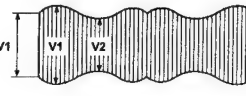
6. X-distance Adjustment

Purpose of adjustment : To maintain compatibility with other VCR (VCP).

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Oscilloscope Standard test tape (only for SP) Driver (+) Type $\phi 4$ 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: NTSC ; SW 30Hz PAL:SW 25Hz Head switching output point RF Envelope output point 	<ul style="list-style-type: none"> Play the standard test tape. 	Left Right Groove of Base A/C
Adjustment Procedure 1) After releasing the auto tracking, lightly turn the fixing screw. Turn the (+) type driver ($\phi 3 \sim \phi 4$) on the X-distance adjusting hole to the right or left. Adjust the RF envelope level to the maximum point and then fix the fixing screws. 2) For the 31mm head, adjust it with the SP tape recorded in the width of 31mm since the head travels on the tape track only for SP with the width of 58mm.			
Connection Diagram 			

DECK MECHANISM ADJUSTMENT

7. Adjustment after Drum Assembly (Video Heads)

Purpose of adjustment : To adjust and stabilize the height change, X-distance change, etc depending on the guide roller after assembling the drum.			
Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Oscilloscope Standard test tape (only for SP) Post Height Adjusting Driver Driver (+) Type Ø 5 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: NTSC : SW 30Hz PAL:SW 25Hz Head switching output point RF Envelope output point 	<ul style="list-style-type: none"> Play the blank tape. Play the standard test tape. 	<ul style="list-style-type: none"> Fine adjustment of guide roller Switching Point Tracking Preset X-distance
Checking/Adjustment Procedure 1) Play the blank tape (empty tape) and check whether the guide roller crumbles or wrinkles the tape and adjust it if necessary. 2) Check that the RF envelope output waveform is flat, and adjust the height of the guide roller while playing the standard test tape. 3) Adjust the switching point. 4) Check the RF envelope output is the maximum when the tracking control locates at the center. If not maximum, set up to ensure that RF envelope output becomes the maximum by turning the (+) type driver (Ø 3 ~ Ø 4) on the base A/C groove.		Connection Diagram  Waveform  V1/V MAX = 0.7 V1/V MAX = 0.8 RF ENVELOPE OUTPUT	

8. Check of Traveling Device after Deck Assembly

8-1. Audio, RF Normalization Time (Locking Time) Check in Play after CUE or REV

Fixtures and tools used	Measuring standard	Connection position	VCR (VCP) status
<ul style="list-style-type: none"> Oscilloscope 6H 3KHz Color Bar Standard Test tape Stop Watch 	<ul style="list-style-type: none"> RF Locking Time: Within 5 seconds Audio Locking Time : Within 10 seconds 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: Audio output RF Envelope output point Audio output jack 	<ul style="list-style-type: none"> Play the 6H 3KHz Color Bar Standard Test tape.
Checking Procedure 1) Check that locking time of the RF and Audio waveform is fallen within the measuring standard in conversion of the play mode from the CUE or the REV mode. 2) Readjust the paragraph 5 and 6 if it deviates from the standard.			

8-2. Check of Tape Curl and Jam Status

Fixtures and tools used	Fixtures and tools used	Fixtures and tools used
<ul style="list-style-type: none"> T-160 Tape T-120 Tape 	<ul style="list-style-type: none"> There must be no jam or curl at the first, middle and end position of tape. 	<ul style="list-style-type: none"> Travel the tape at the position of its first and end.
Checking Procedure 1) Check there is no abnormality of every traveling post status. 2) There must be no abnormal operation of the counter in occurrence of folding of the bottom tape. There must be not abnormality of audio signal in damage of the top tape. 3) If there is abnormality, readjust the adjustment paragraph 4 and 5.		

PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

1. Checking Points prior to Repair

Following abnormal phenomena may be repaired by removal of foreign materials and oil supply. Check oiling is required at the checking set or cleaning status is complete. Determine that necessity of checking and repair the set exists after checking the using period of the set together with the user. In this case, followings must be checked:

Phenomena	Checking Points and Cause	Replacement
Color beat	Pollution of Full-Erase Head	o
S/N, Color Faded	Pollution of Video Head	o
Horizontal, Vertical Jitter	Pollution of Video Head or Tape Transport System	o
Poor Sound, Low Sound	Pollution of Audio/Control Head	o
No tape wound or tape wound loosely, FF or REV impossible, or slow turning	Pollution of Pinch Roller or Belt Capstan	o
Tape loosely wound in REV or Unloading	Deterioration of Clutch Assembly D37 Torque Pollution of Drum and Traveling Device	o Fig. C-9-3

CAUTIONS

If operation of the position with (O) mark is abnormal even after removing cause, replace it with substitute product since it shows damage or wearing.

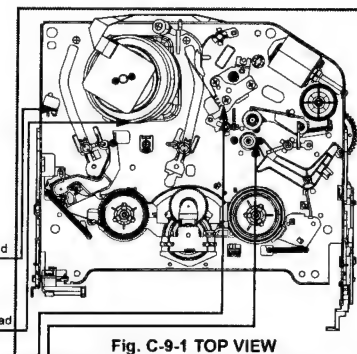


Fig. C-9-1 TOP VIEW

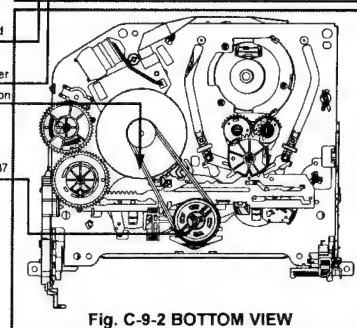


Fig. C-9-2 BOTTOM VIEW

* No. (1) ~ (12) shows sequence that the tape moves from the supply reel to the take-up reel.)

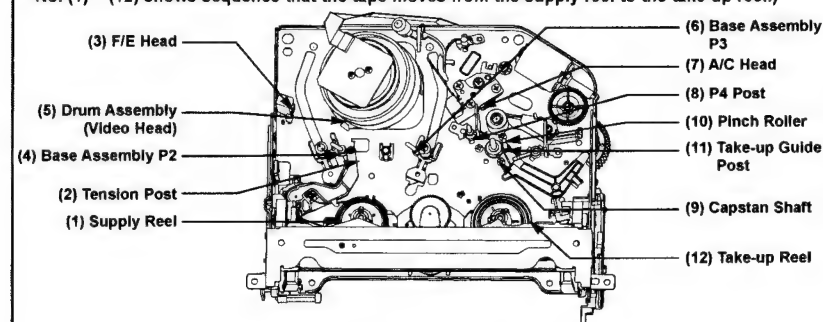


Fig. C-9-3 Tape Transport System

PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

2. Essential Check and Repair

Recording density of the video is far higher than the audio. Therefore video parts are very precise so as to allow only error of 1/1000mm or so in order to maintain compatibility with other videos.

If one of these parts is polluted or old, same phenomena will appear as they are damaged.

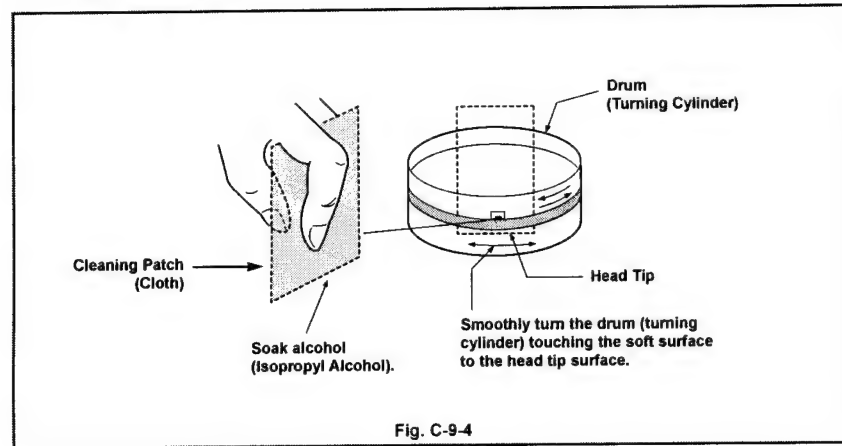
To maintain clear screen, regular check, replacement of old and damaged parts and oil supply, etc are essential.

3. Regular Check and Repair

Check and repair schedule is not constant since they vary depending on method that the consumer uses video and environment where the video is installed at. However, for the video used by common household, good screen will be maintained if regular check and repair per 1,000 hour is performed. The following chart shows relationship between using time and checking time:

Table 1

Time Requiring Checking	About 1 year	About 18 months	About 3 years
Average hours used per day			
One hour			
Two hours			
Three hours			



4. Tools for Check and Repair

- (1) Grease: Floil G-3114 (KANTO) or equivalent grease (Green)
- (2) Grease: Kanto G-754, PL-433 (Yellow)
- (3) Alcohol (Isopropyl Alcohol)
- (4) Cleaning Patch (cloth)

5. Maintenance Process

5-1) Removal of Foreign Material

- (1) Removal of foreign material from video head (Fig. C-9-4) Firstly try to use a cleaning tape.

Use a cleaning patch if foreign materials are not removed with the cleaning tape due to severe dirty of the head. Soak the cleaning patch in alcohol and put it to the head tip. Smoothly turn the drum (turning cylinder) to the right or left (In this case, the cleaning patch must not be moved vertically).

After completely drying the head, test the traveling status of the tape. If alcohol (Isopropyl Alcohol) remains at the video head, the tape may be damaged when this solution touches with the head surface.

Never use a cloth bar (commercial sale)

- (2) Wipe the tape transport system and the drive system with the cleaning patch soaked in alcohol (Isopropyl Alcohol) when removing foreign materials from them.
 - 1) The part touched with the traveling tape is called as tape transport system. The drive system consists of parts to travel the tape.
 - 2) Care must be exercised so that unreasonable force to change the pattern will be applied to the tape transport system during removal of foreign materials.

PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

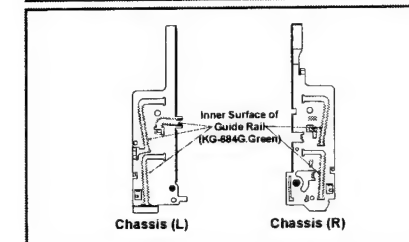
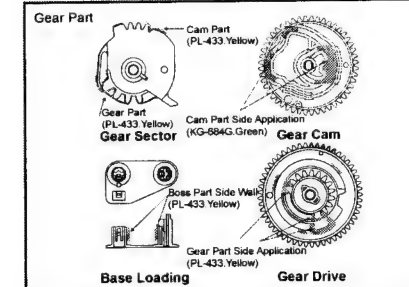
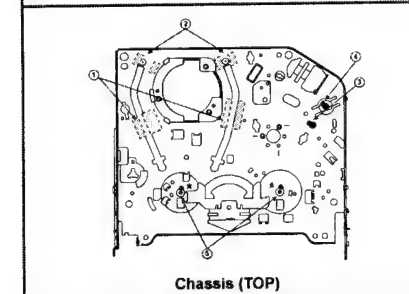
5-2) Grease Applications

(1) Grease Application Method

Apply grease by using a cloth swab or brush. Care must be exercised so that excess quantity should not be used. If the excessive quantity is applied, wipe it with the gauze soaked in alcohol (Isopropyl Alcohol).

NOTE: POSITION OF GREASE APPLICATION

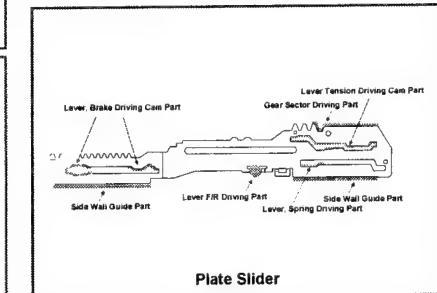
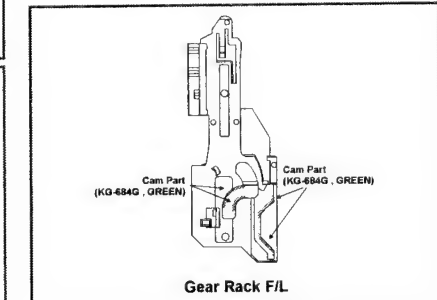
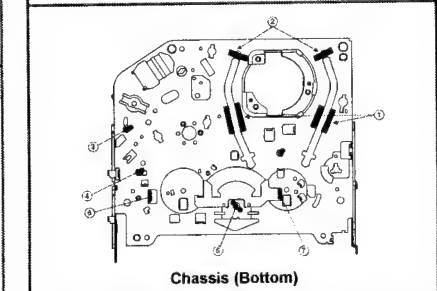
- (1) Inner Side Surface and Top Surface of Loading Path
- (2) Stable Adhesion Part of Base P2, P3
- (3) Arm Pinch Shaft
- (4) Gear Wheel Shaft
- (5) Reel S. T. Shaft
- (1) (2) (3) (4) KG-684G (Green)
- (5): PL-433 (Yellow)



(2) Regular Grease Application

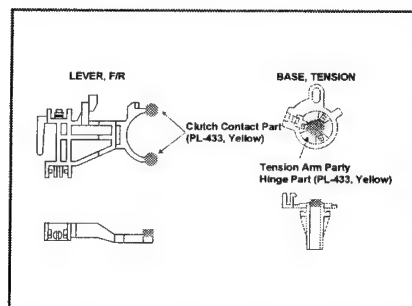
Apply grease to the designated application position every 500 hour.

- (1) Inner Side Surface and Top Surface of Loading Path
- (2) Stable Adhesion Part of Base P2, P3 Coil
- (3) Gear Cam Shaft
- (4) Gear Drive Shaft
- (5) Clutch Shaft Groove
- (6) Guide Part on the Plate Slider Side Wall (Left)
- (7) Guide Part on the Plate Slider Side Wall (Right)
- (1) (2) (3) (4) (5) (6) (7): KG-684G (Green)

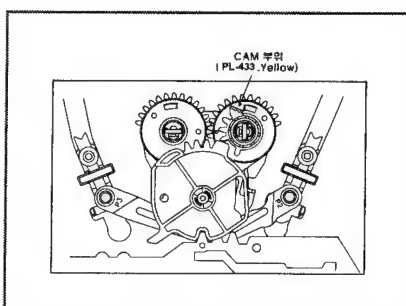


PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

Lever, F/R, Base, Tension



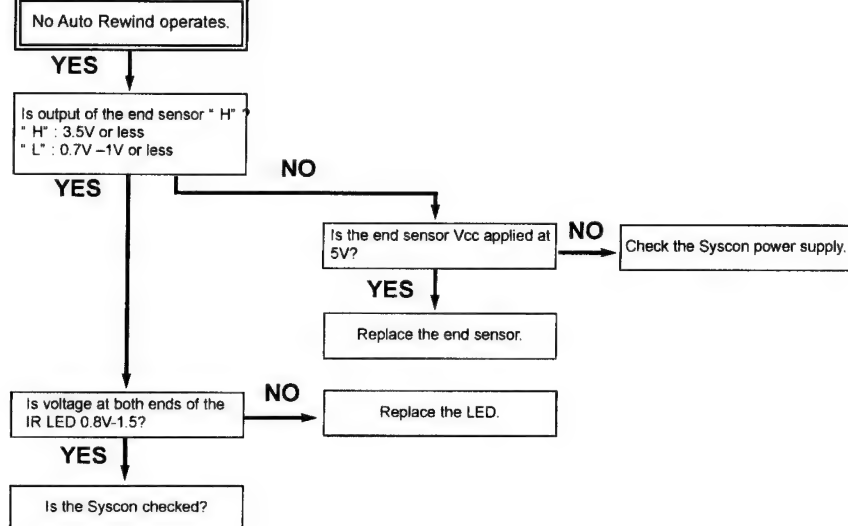
GEAR AY, P2 & P3



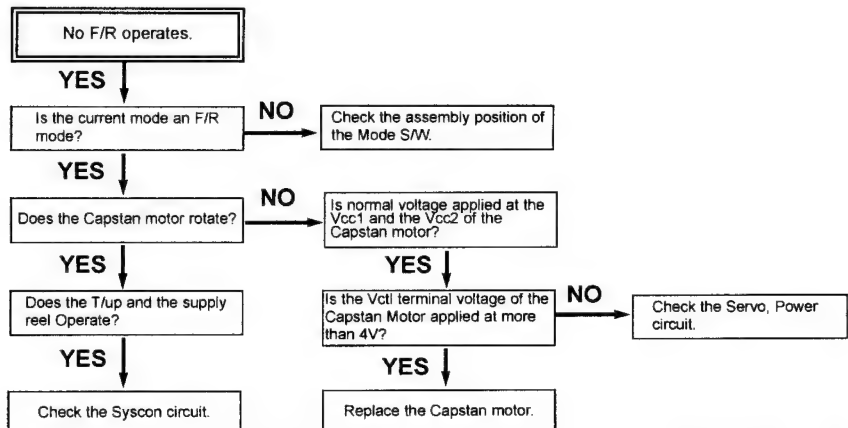
MECHANISM TROUBLESHOOTING GUIDE

1. Deck Mechanism

A.

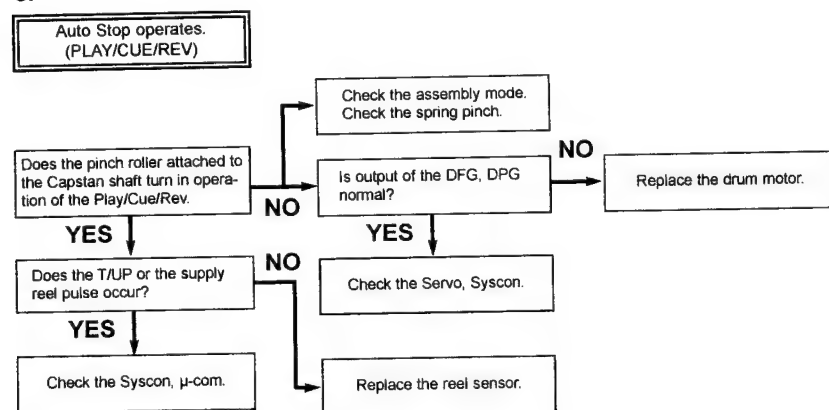


B.

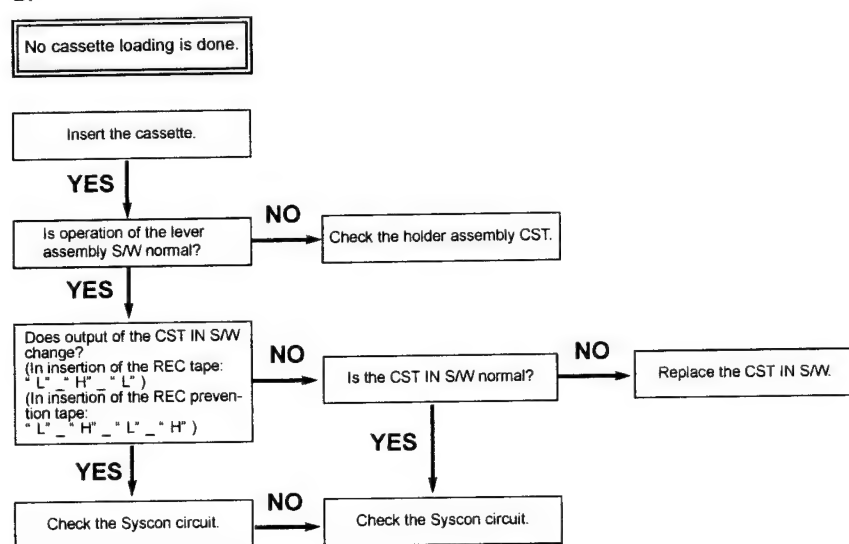


MECHANISM TROUBLESHOOTING GUIDE

C.

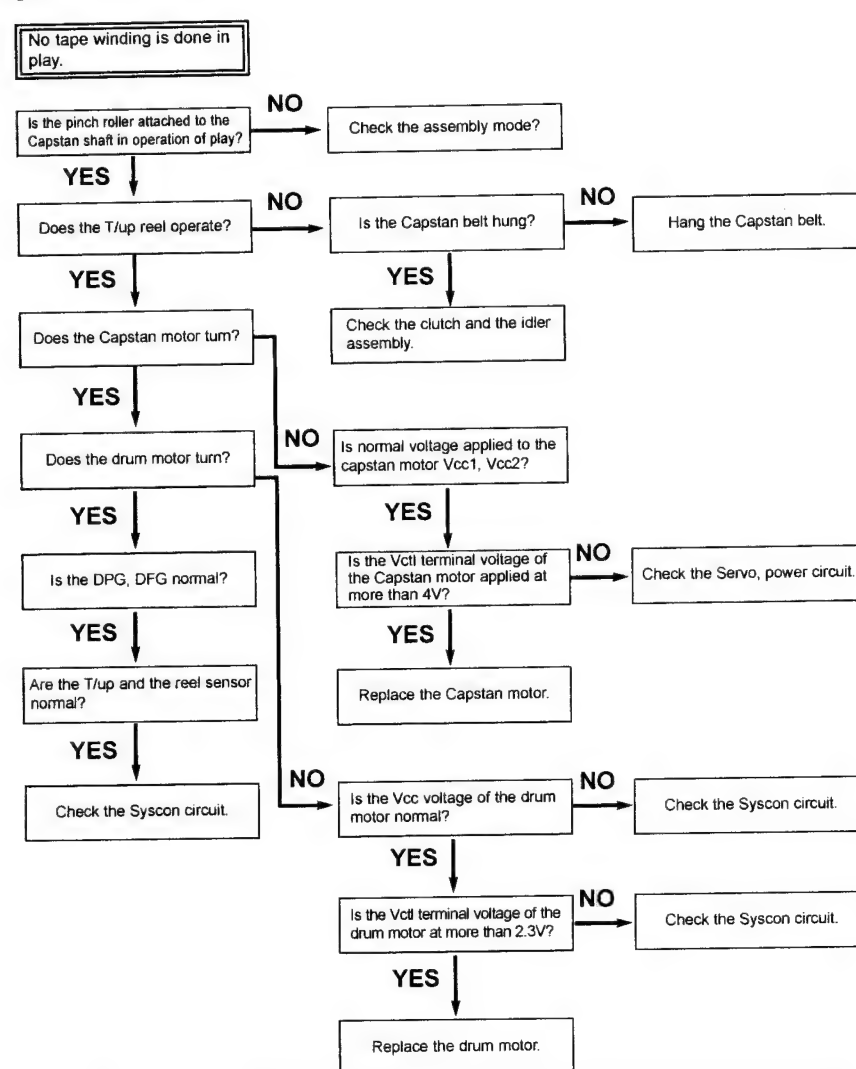


D.



MECHANISM TROUBLESHOOTING GUIDE

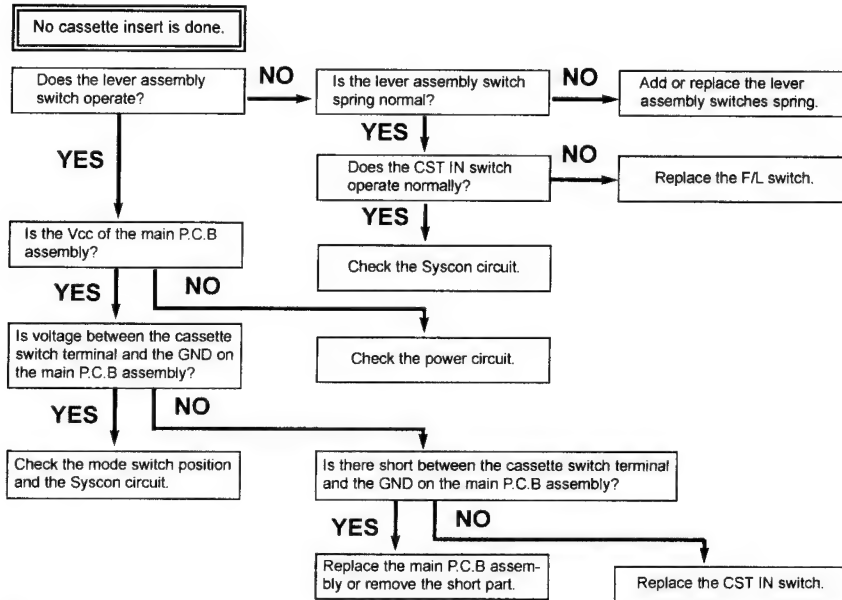
E.



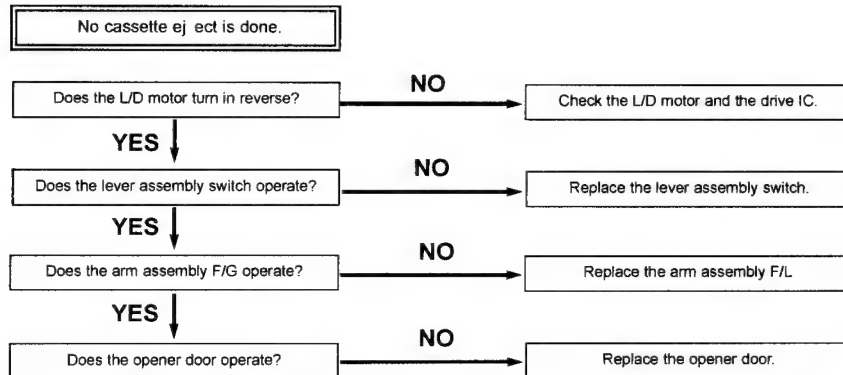
MECHANISM TROUBLESHOOTING GUIDE

2. Front Loading Mechanism

A.

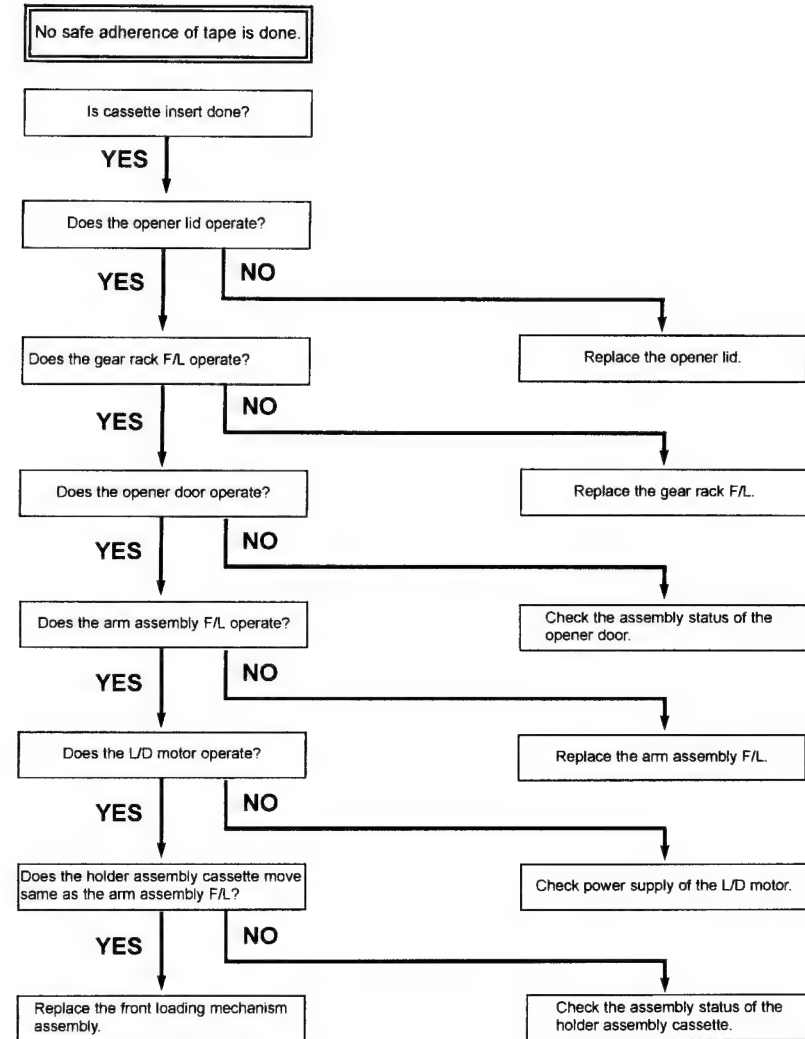


B.



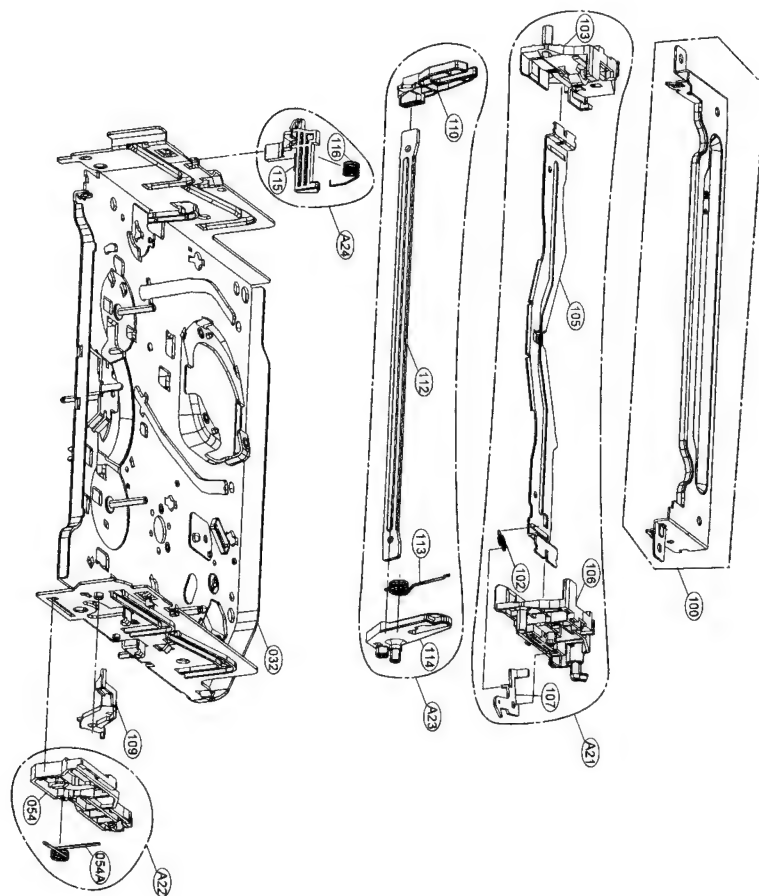
MECHANISM TROUBLESHOOTING GUIDE

C.



EXPLODED VIEWS

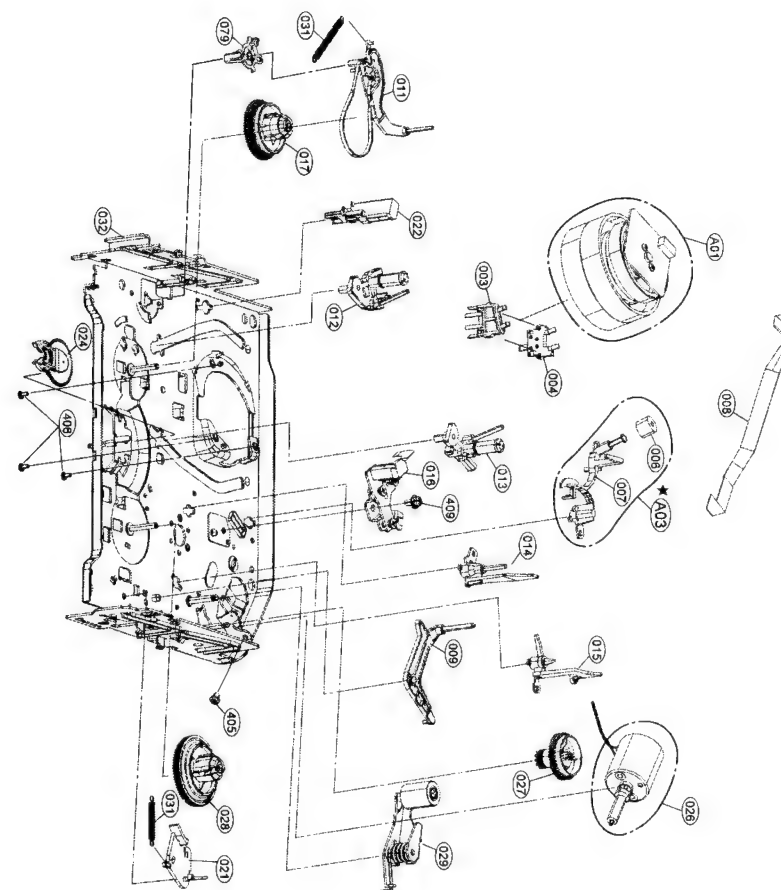
1. Front Loading Mechanism Section



EXPLODED VIEWS

2. Moving Mechanism Section (1)

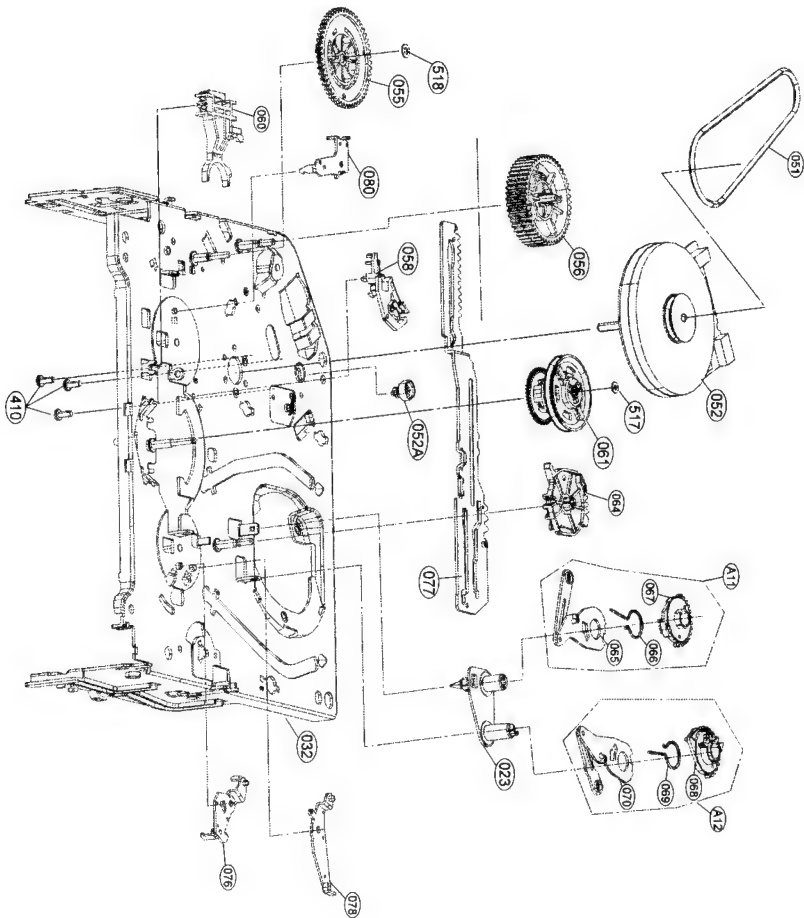
★ OPTIONAL PART



EXPLODED VIEWS

3. Moving Mechanism Section (2)

MEMO



SECTION 5 MECHANISM OF DVD PART

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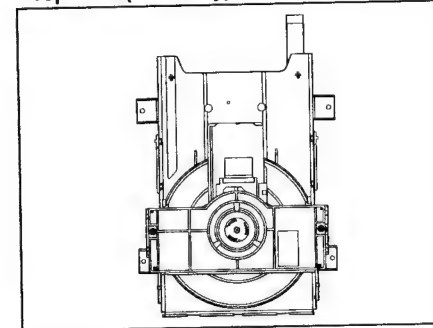
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EXPLODED VIEW

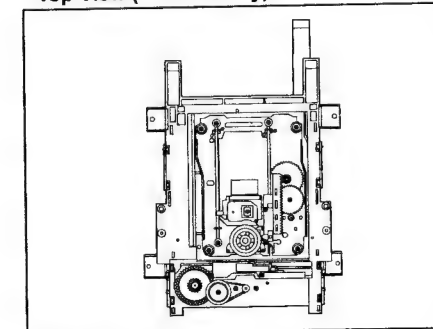
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DECK MECHANISM PARTS LOCATION

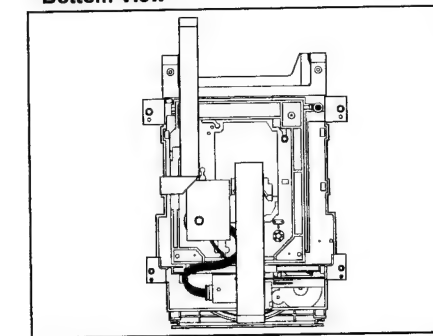
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.	Parts	Fixing Type	Disassembly	Figure
1	Holder Clamp	2 Screws, 2 Locking Tabs		5-1
1	2 Clamp Assembly Disc			5-1
1, 2	3 Plate Clamp			5-1
1, 2, 3	4 Magnet Clamp			5-1
1, 2, 3, 4	5 Clamp Upper			5-1
1	6 Tray Disc			5-2
1, 6	7 Base Assembly Sled	4 Screws,		5-3
1, 2, 6	8 Gear Assembly Feed			5-3
1, 2, 6, 8	9 Gear Middle			5-3
1, 2, 6, 8, 9	10 Gear Assembly Rack	1 Screw		5-3
1, 2, 7	11 Rubber Rear			5-3
1, 2, 7	12 Frame Assembly Up/Down	1 Screw	Bottom	5-4
1, 2	13 Belt Loading	1 Locking Tab		5-4
1, 2, 13	14 Gear Pulley			5-4
1, 2, 13, 14	15 Gear Loading	1 Locking Tab		5-4
1, 2, 7, 12, 13, 14	16 Guide Up/Down			5-4
1, 2, 13	17 PWB Assembly Loading	1 Locking Tab 1 Hook 2Screw	Bottom	5-4
1, 2, 7, 12, 13, 14, 15, 16, 17	18 Base Main			5-4

Note

When reassembling, perform the procedure in reverse order.

The " Bottom" on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

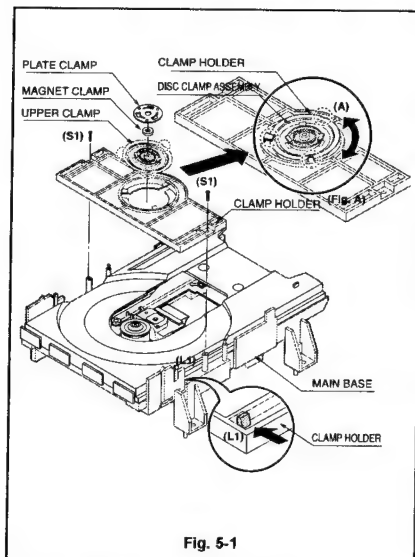


Fig. 5-1

1. Holder Clamp (Fig. 5-1)

- 1) Release 2 Screws(S1).
- 2) Unhook 2 Locking Tabs(L1).
- 3) Lift up the Holder Clamp and then separate it from the Base Main.

1-1. Clamp Assembly Disc

- 1) Place the Clamp Assembly Disc as Fig. (A).
- 2) Lift up the Clamp Assembly Disc in direction of arrow(A).
- 3) Separate the Clamp Assembly Disc from the Holder Clamp.

1-1-1. Plate Clamp

- 1) Turn the Plate Clamp to counterclockwise direction and then lift up the Plate Clamp.

1-1-2. Magnet Clamp

- 1-1-3. Clamp Upper

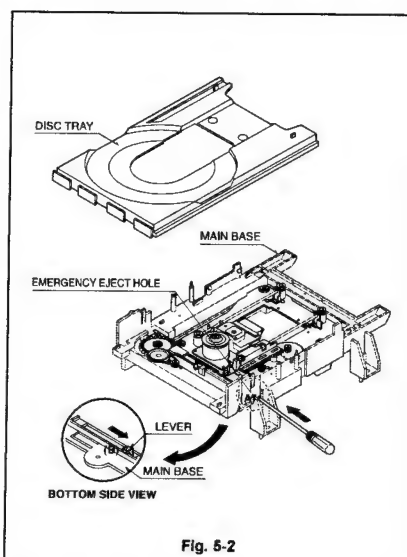


Fig. 5-2

2. Tray Disc (Fig. 5-2)

- 1) Insert and push a Driver in the emergency eject hole(A) at the right side, or put the Driver on the Lever(B) of the Gear Emergency and pull the Lever(B) in direction of arrow so that the Tray Disc is ejected about 15~20mm.
- 2) Pull the Tray Disc until it is separated from the Base Main completely.

DECK MECHANISM DISASSEMBLY

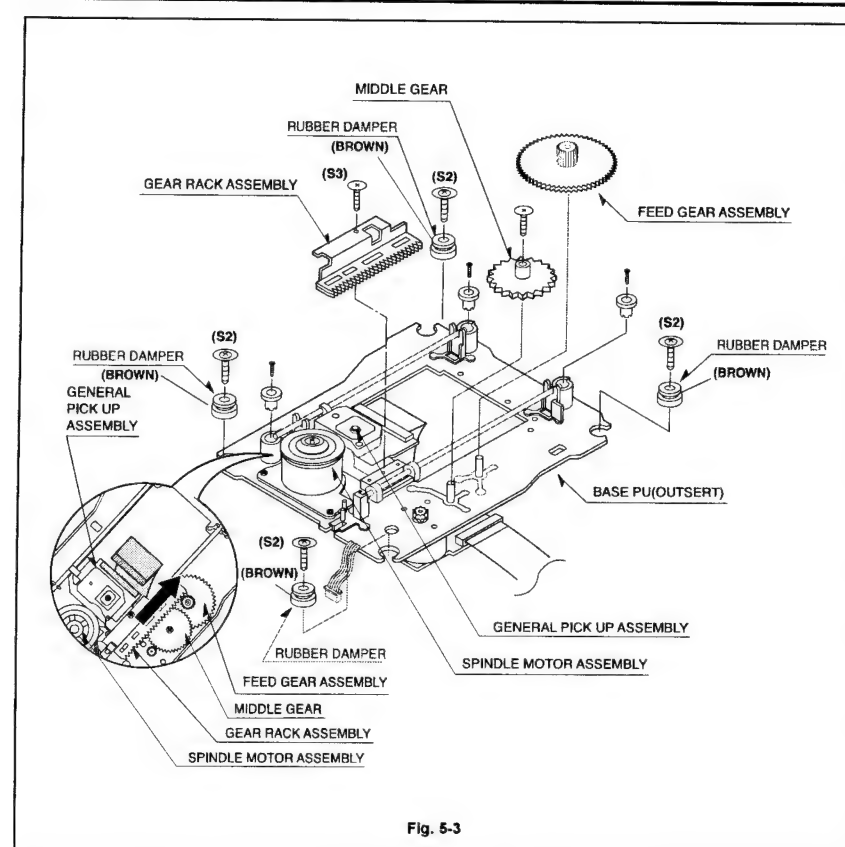


Fig. 5-3

3. Base Assembly Sled (Fig. 5-3)

- 1) Release 4 Screw(S2).
- 2) Disconnect the FFC Connector(C1).

3-1. Gear Assembly Feed

3-2. Gear Middle

3-3. Gear Assembly Rack

- 1) Release the Screw(S3)

4. Rubber Rear (Fig. 5-3)

DECK MECHANISM DISASSEMBLY

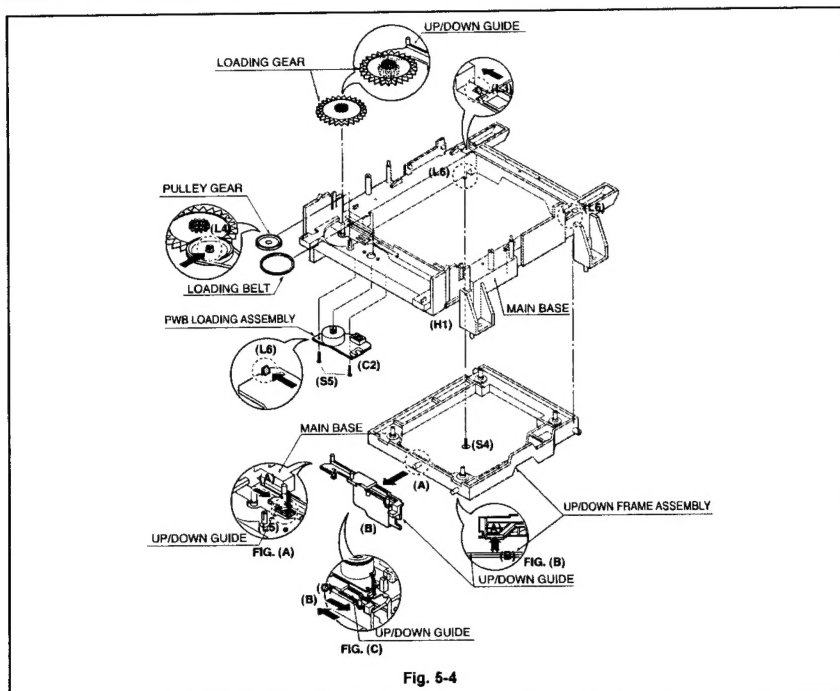


Fig. 5-4

5. Frame Assembly Up/Down (Fig. 5-4)**Note**

Put the Base Main face down(Bottom Side)

- 1) Release the Screw(S4)
- 2) Unlock the Locking Tab(L3) in direction of arrow and then lift up the Frame Assembly Up/Down to separate it from the Base Main.

Note

- When reassembling move the Guide Up/Down in direction of arrow(C) until it is positioned as Fig.(C).
- When reassembling insert (A) portion of the Frame Assembly Up/Down in the (B) portion of the Guide Up/Down as Fig.(B)

6. Belt Loading(Fig. 5-4)**Note**

Put the Base Main on original position(Top Side)

7. Gear pulley (Fig. 5-4)

- 1) Unlock the Locking Tab(L4) in direction of arrow(B) and then separate the Gear Pulley from the Base Main.

8. Gear Loading (Fig. 5-4)**9. Guide Up/Down (Fig. 5-4)**

- 1) Move the Guide Up/Down in direction of arrow(A) as Fig.(A)
- 2) Push the Locking Tab(L5) down and then lift up the Guide Up/Down to separate it from the Base Main.

Note

When reassembling place the Guide Up/Down as Fig.(C) and move it in direction arrow(B) until it is locked by the Locking Tab(L5). And confirm the Guide Up/Down as Fig.(A)

10. PWB Assembly Loading (Fig. 5-4)**Note**

Put the Base Main face down(Bottom Side)

- 1) Release 2 Screws(S5)
- 2) Unlock the Loading Motor (C2) from the Hook (H1) on the Base Main.
- 3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 5-4)

SECTION 5 MECHANISM OF DVD PART

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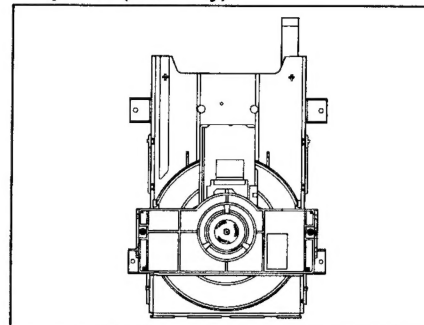
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EXPLODED VIEW

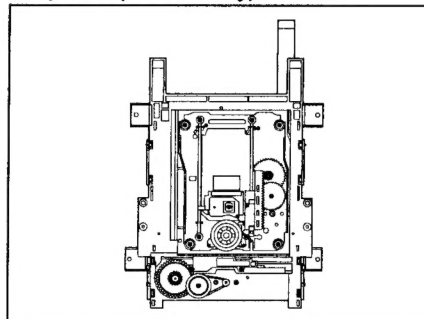
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DECK MECHANISM PARTS LOCATION

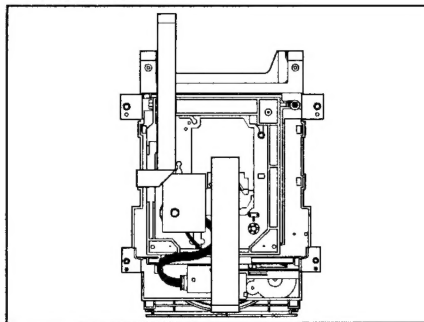
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.	Parts	Fixing Type	Disassembly	Figure
1	Holder Clamp	2 Screws, 2 Locking Tabs		5-1
1	2 Clamp Assembly Disc			5-1
1, 2	3 Plate Clamp			5-1
1, 2, 3	4 Magnet Clamp			5-1
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1, 6	7 Base Assembly Sled	4 Screws,		5-3
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1, 2, 6, 8, 9	10 Gear Assembly Rack	1 Screw		5-3
1, 2, 7	11 Rubber Rear			5-3
1, 2, 7	12 Frame Assembly Up/Down	1 Screw	Bottom	5-4
1, 2	13 Belt Loading	1 Locking Tab		5-4
1, 2, 13	14 Gear Pulley			5-4
1, 2, 13, 14	15 Gear Loading	1 Locking Tab		5-4
1, 2, 7, 12, 13, 14	16 Guide Up/Down			5-4
1, 2, 13	17 PWB Assembly Loading	1 Locking Tab 2 Screw	Bottom	5-4
1, 2, 7, 12, 13, 14, 15, 16, 17	18 Base Main			5-4

Note

When reassembling, perform the procedure in reverse order.

The "Bottom" on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

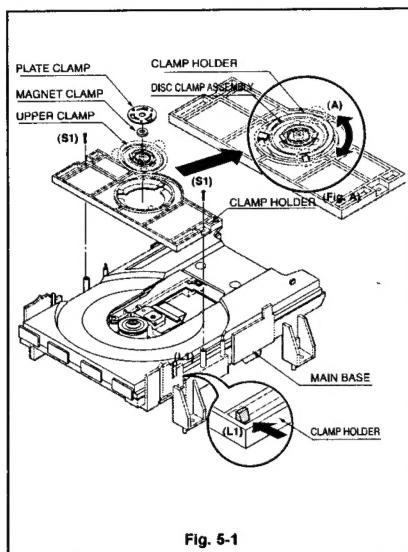


Fig. 5-1

1. Holder Clamp (Fig. 5-1)

- 1) Release 2 Screws(S1).
- 2) Unhook 2 Locking Tabs(L1).
- 3) Lift up the Holder Clamp and then separate it from the Base Main.

1-1. Clamp Assembly Disc

- 1) Place the Clamp Assembly Disc as Fig. (A).
- 2) Lift up the Clamp Assembly Disc in direction of arrow(A).
- 3) Separate the Clamp Assembly Disc from the Holder Clamp.

1-1-1. Plate Clamp

- 1) Turn the Plate Clamp to counterclockwise direction and then lift up the Plate Clamp.

1-1-2. Magnet Clamp

1-1-3. Clamp Upper

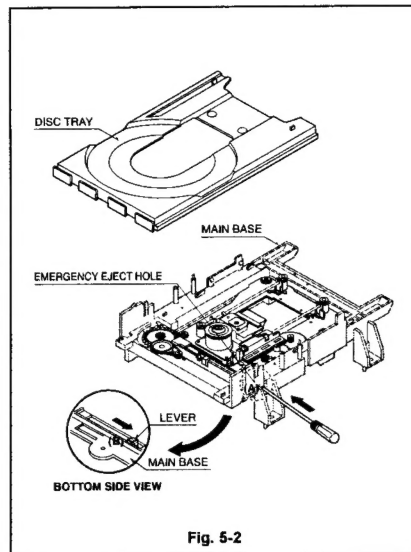


Fig. 5-2

2. Tray Disc (Fig. 5-2)

- 1) Insert and push a Driver in the emergency eject hole(A) at the right side, or put the Driver on the Lever(B) of the Gear Emergency and pull the Lever(B) in direction of arrow so that the Tray Disc is ejected about 15~20mm.
- 2) Pull the Tray Disc until it is separated from the Base Main completely.

DECK MECHANISM DISASSEMBLY

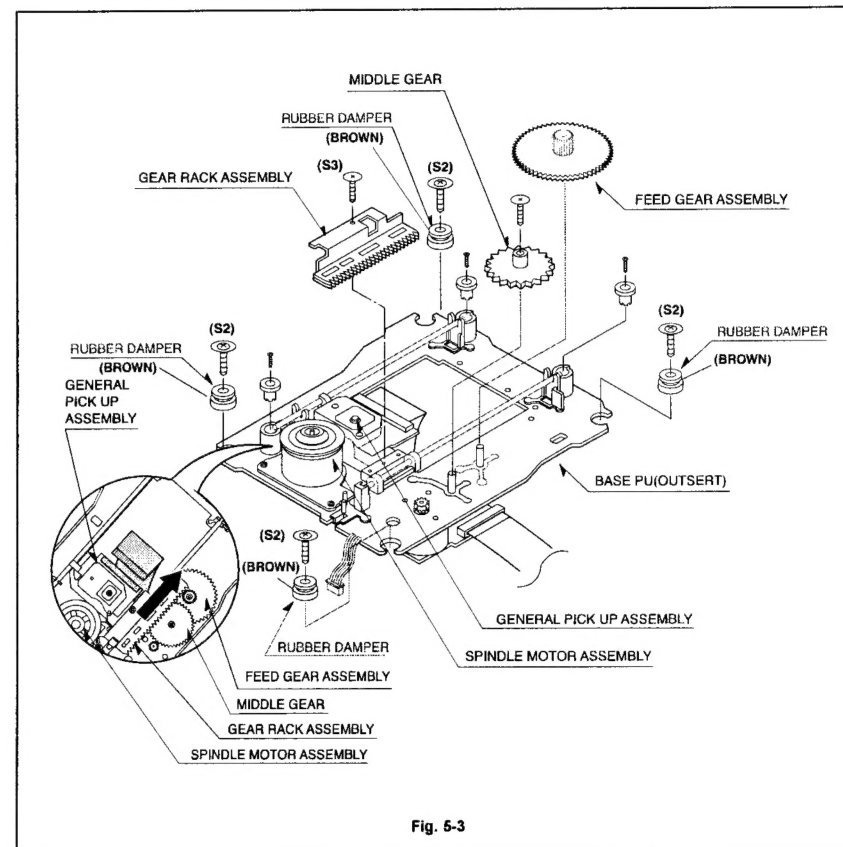


Fig. 5-3

3. Base Assembly Sled (Fig. 5-3)

- 1) Release 4 Screw(S2).
- 2) Disconnect the FFC Connector(C1)

3-1. Gear Assembly Feed

3-2. Gear Middle

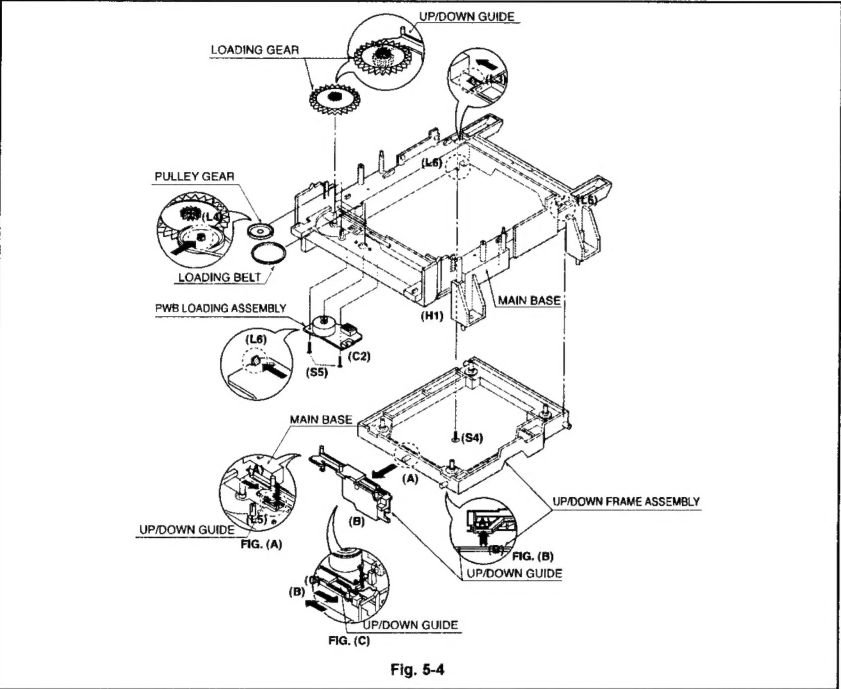
3-3. Gear Assembly Rack

- 1) Release the Screw(S3)

4. Rubber Rear (Fig. 5-3)

DECK MECHANISM DISASSEMBLY

MEMO



5. Frame Assembly Up/Down (Fig. 5-4)

Note

- Put the Base Main face down(Bottom Side)
- 1) Release the Screw(S4)
 - 2) Unlock the Locking Tab(L3) in direction of arrow and then lift up the Frame Assembly Up/Down to separate it from the Base Main.

Note

- When reassembling move the Guide Up/Down in direction of arrow(C) until it is positioned as Fig.(C).
- When reassembling insert (A) portion of the Frame Assembly Up/Down in the (B) portion of the Guide Up/Down as Fig.(B)

6. Belt Loading(Fig. 5-4)

Note

Put the Base Main on original position(Top Side)

7. Gear pulley (Fig. 5-4)

- 1) Unlock the Locking Tab(L4) in direction of arrow(B) and then separate the Gear Pulley from the Base Main.

8. Gear Loading (Fig. 5-4)

9. Guide Up/Down (Fig. 5-4)

- 1) Move the Guide Up/Down in direction of arrow(A) as Fig.(A)
- 2) Push the Locking Tab(L5) down and then lift up the Guide Up/Down to separate it from the Base Main.

Note

When reassembling place the Guide Up/Down as Fig.(C) and move it in direction arrow(B) until it is locked by the Locking Tab(L5). And confirm the Guide Up/Down as Fig.(A)

10. PWB Assembly Loading (Fig. 5-4)

Note

Put the Base Main face down(Bottom Side)

- 1) Release 2 Screws(S5)
- 2) Unlock the Loading Motor (C2) from the Hook (H1) on the Base Main.
- 3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 5-4)